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ABSTRACT

This comprehensive guide to identification of gifted and talented students in Indiana is intended to aid the 85% of Indiana school districts which provide programs for gifted students. A relative, rather than absolute, standard is proposed for identifying the top 5 to 7 percent of students. Giftedness in the areas of intellectual/academic abilities, visual and performing arts, creativity, and leadership is addressed. Individual chapters consider the following: (1) step-by-step processes involved in identification of gifted/talented students; (2) the underlying philosophy, guiding principles and relevant portions of state law; (3) preparation for identification procedures (e.g., determination of program philosophy and program options and staffing); (4) guidelines for selecting identification instruments; (5) suggestions for selection of criterion levels, data analysis and appeal, review and exit procedures; (6) techniques for identifying underserved populations (e.g., underachievers, racial minorities, rural, and handicapped students); (7) inservice training of staff in identification procedures; (8) student selection; and (9) methods to evaluate the efficacy of the identification policies. The 10th and final chapter presents a summary of the processes presented and planning guidelines. Appendixes provide additional information on formal measures, informal measures, abbreviations and symbols, and resources in Indiana. Also provided are a 54-item bibliography and a 112-term glossary. Many tables and sample forms are also included. (DB)

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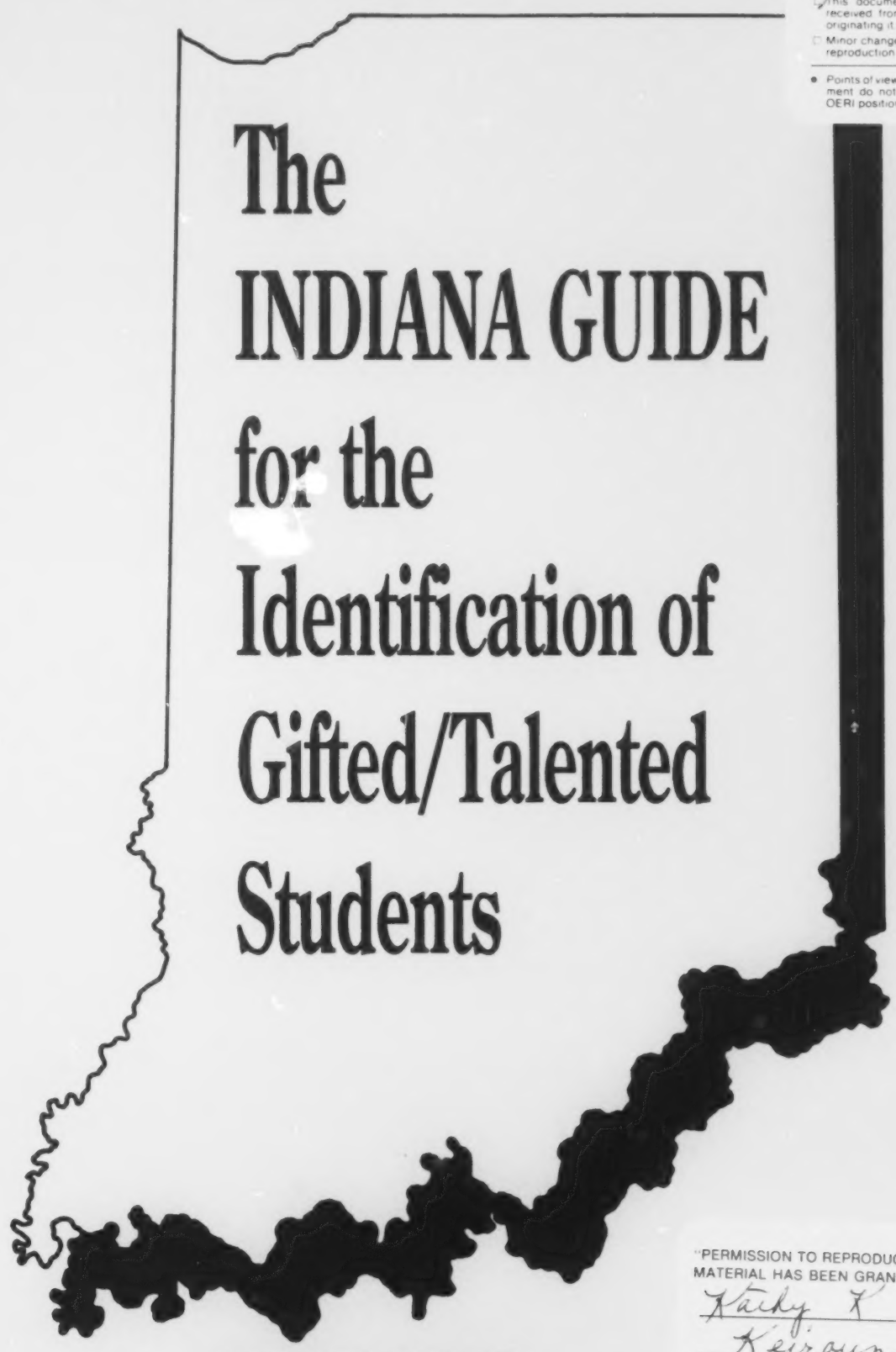

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The INDIANA GUIDE for the Identification of Gifted/Talented Students

Indiana Department of Education
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Bremen Public Schools
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Kathryn S. Keirouz, Ph.D.
Editor

Introduction

In 1985, the Indiana Department of Education embarked upon a journey that was to result in a guide on the identification of gifted and talented students. Several questions existed, however, that first needed to be addressed before the guide could be of maximum use to its readers. The following questions, answered in earlier years, continued to create controversy and required reanalysis: "Who are the gifted and talented in Indiana?" and "How are they to be defined?"

A study of the other states revealed that there is no universal definition of **gifted and talented**. Some states reserve the term **gifted** for those who have high potential in academic and intellectual areas and reserve the term **talented** for those with high potential in the arts. Other states define the term in a hierarchy and treat giftedness in degrees. They consider the brightest of the bright to be **gifted** and those with less ability or potential to be **talented**.

It was discovered in a 1986 state evaluation (conducted by the University of Illinois) that Indiana schools made no distinction between the terms **gifted** and **talented**, either in the identification process or the delivery of programs. It is for this reason that the phrase **gifted and talented**, when appearing in Indiana Department of Education correspondence and documents, is written as **gifted/talented**. The diagonal line separating the two words assists in conveying the message that the two terms are synonymous.

Another issue requiring resolution dealt with an absolute standard for identifying the gifted/talented versus a relative standard for identifying this population. Our statistics indicate that the standard curriculum does not provide enough challenge for approximately five to seven percent of the student population. These students need a modified or differentiated curriculum if their potential is to be realized. To reiterate, our definition presumes a needed deviation from that which already exists because, by definition, that which already exists is not challenging enough. If what already exists (in this case, the standard curriculum) were uniform in nature, it would be a simple task to apply an absolute standard for identifying the gifted/talented population.This uniformity, however, does not exist. One has only to encounter a transfer student, either from within or out of state, to be convinced that concepts and skills are dealt with differently in different school systems.* Since standard curriculum is not uniform in nature, we would be denying these local differences if we were to mandate that an absolute standard of identification be employed (the same set of criteria or standards for all Indiana schools). The state instead advocates a relative standard for identifying the top five to seven percent. In this way, the gifted/talented population is defined within the context of local standard curriculum.

*The Indiana Proficiency Curriculum Guide is an excellent beginning effort to address this problem (a problem that is not unique to Indiana).

The final issue to be resolved dealt with the categories of giftedness. In the early years, most of the states adopted the federal definition of **gifted and talented**, which included the following categories of potential aptitude:

- intellectual
- academic
- visual and performing arts
- creativity
- leadership
- psychomotor

Indiana used the first five of the six categories in this list and incorporated the categories into an administrative code on gifted education. It should be noted that while gifted education is not mandated in this state, 85 percent of Indiana's school corporations do provide gifted programs for their eligible students. The corporations receiving gifted/talented education funds use this Indiana Administrative Code (511 IAC 6-9) as a guide in program planning and when documenting compliance with state expectations in three areas: identification, curriculum and evaluation.

In 1986, our state evaluation findings caused us to rethink the five federal categories that we were using. It was found that our local schools used the same identification procedures, tests and program deliveries for both the intellectually and academically gifted/talented. Furthermore, our state requirement of using multiple criteria and utilizing standardized tests became troublesome for those trying to identify gifted/talented students in the areas of creativity and leadership due to the void of standardized tests in these two areas. Schools that attempted to provide programs in leadership or creativity were then not in compliance with the identification section of the gifted/talented education rule. Since the ability to think creatively and to lead are skills that should be honed for any exhibited strength, the state has advocated that both be incorporated into, and addressed in, any formal gifted program. There are now two categories of giftedness for which Indiana schools can receive additional funding: intellectual/academic and visual and performing arts. The specific rule language for these categories, as well as the clarification on how creativity and leadership are to be addressed, can be found on page 15 of this guide.

The Indiana Gifted/Talented Education Advisory Board was instrumental in assisting with the needed clarifications in the 511 rule, which in turn paved the way for the guide that follows. A deep appreciation is felt for the board members and also for the many hands and minds that contributed to this long awaited resource guide.

Pat Stafford
Program Manager

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Chapter 1

The Process of Identification and Outline of the Guide

The Indiana Guide for the Identification of Gifted Students, referenced throughout this document as the ID Guide, provides a process for the identification of students to be placed in a gifted/talented program. Procedures are outlined which meet state requirements and are responsive to the program goals of local school corporations and the communities that they serve. The ID Guide may be used to design a totally new identification procedure, to select students for a new program area, to improve identification of various special populations or to conduct an evaluation of existing procedures. The ID Guide has been written to help educators comply with the Indiana guidelines (511 IAC 6-9) for identification of gifted/talented children.

The process of identifying children for a gifted/talented program involves a series of actions. The first step is the creation of a nomination "pool" for consideration purposes. Traditionally, twice the number of students to be served are placed in the nomination pool. Therefore, approximately 10-14 percent of the students in the grades being served are nominated. After the creation of the "pool," more information is collected to determine each student's educational needs. Third, a selection committee analyzes all of the data and decides which students' needs may be met best by the program being offered. In some cases, it may be desirable to obtain even further information about a particular student, in order to evaluate fully his/her needs and abilities. After the committee has made the placement decisions, students are notified of their status. An additional step allows students to appeal placement decisions via a review by a separate committee. Finally, exit/removal procedures are available for selected students whose needs are not met by the program. This entire process is depicted in Table 1 on page 2. The symbols beside each step are used throughout the ID Guide as a visual aid for the reader.

Although Table 1 depicts the steps in selecting students for a program, the planning of this process requires several prior steps. The ID Guide provides information on both the planning of the identification process and

the actual selection of students. It is divided into chapters based on the step-by-step planning of the identification process, which is depicted in Table 2 on the following page. Note that the actual selection of students (i.e., Table 1) is included as Step D of Table 2. Again, the symbols depicted beside each step are used throughout the ID Guide as a visual cue to enable the reader to keep the process in mind.❑

Table 1. Steps in Selecting Students for a Gifted/Talented Program (with typical procedures used)

■ A. **Nomination of "pool"**
Nomations–Teacher, parent, student, peer
Student grades
Standardized group test scores
Screening committee
Screening criteria
⬇

▼ B. **Secondary screening**
Group or individual test scores
Student products
Rating scales–Teacher, parent, student, peer
Interviews/auditions
Other nontraditional measures to identify underserved populations
⬇

● C. **Data Analysis**
Cutoff threshold, matrix, T-scores or student profiles
Selection committee
Selection criteria
⬇

➨ D. **Placement Decisions and Notifications**
Placement decisions based on individual student needs
Notification–letters, telephone, conferences
Permission
⬇

✔ E. **Appeals and Reviews**
Review committee
Extra testing
Conferences
Acceptance/denial/conditional acceptance ("try out" period)
⬇

☆ F. **Exits and Removals**
Conferences
Probationary period
Exit/removal
Renomination the next year

Table 2. Steps in Determining Identification Procedures for a Gifted/Talented Program

A. Preparation (Chapter 3)

- Selection of broad-based planning committee
- Determination of program philosophy and options
- Determination of screening, selection and review committees
- Planning for the evaluation process

B. Selection of Instruments and Procedures

- Instruments **(Chapter 4)**
- Procedures: **(Chapter 5)**
  - ■ Nomination
  - ▼ Secondary screening
  - ● Data analysis
  - ➨ Placement decisions and notifications
  - ✔ Appeals and reviews
  - ☆ Exits and removals
- Special Considerations: Underserved populations **(Chapter 6)**

C. Inservice of Staff (Chapter 7)

D. Selection of Students (Chapter 8)

- ■ Nomination of "pool"
- ▼ Secondary Screening
- ● Data Analysis
- ➨ Placement Decisions and Notifications
- ✔ Appeals and Reviews
- ☆ Exits/Removals

E. Evaluation (Chapter 9)

- Formative
- Summative

Chapter 2

Characteristics, Principles and Regulations

CHARACTERISTICS OF GIFTED/TALENTED STUDENTS

In order to identify properly the members of any particular group of people, it is necessary to understand the characteristics of that group. Therefore, before continuing with the text, a quick review of the characteristics of gifted children is in order. These traits should be kept in mind throughout the process of identification. The following is a list of attributes often observed in gifted and talented children. A gifted or talented child often:

- has unusual perception and insight,
- has good recall and quick mastery of factual information,
- has an extensive vocabulary, used correctly,
- knows a large amount of information on a variety of topics,
- asks thorough questions about many topics,
- has good reasoning ability, and recognizes relationships,
- thinks in a logical manner,
- demonstrates good problem-solving techniques,
- is self-initiated and self-directed on topics of interest,
- is inventive, creative and original in thinking,
- is willing to take on a challenge,
- is able to express himself/herself well,
- likes to share interests with others,
- has high interest or performance in particular areas, and
- includes many details in products.

The number of attributes possessed by any individual is not as significant as the degree to which each is demonstrated and the fact that those attributes are exhibited at an earlier age than that of his/her peers.

Many people hold stereotypes about gifted/talented students. Some of these stereotypes are depicted on the next page. This illustration can be used as a humorous way to learn about some of the characteristics of gifted youngsters by reviewing and discussing the traits presented.

THE
COULD BE BUT NOT NECESSARILY
GIFTED CHILD

PRINCIPLES AND THEIR RATIONALES

The identification procedures contained in this manual are based on a number of principles derived in part from Indiana's definition of giftedness. The principles and the rationales underlying each are presented below.

Principle 1

The focus of identification is not to label a student as gifted, but to recognize and respond to the educational needs of the highly able learner.

Educators have as their goal the provision of services that appropriately meet the needs of all children. However, it is recognized that gifted and talented students have abilities which exceed those of the average child to such an extent that, in order to reach their maximum potential, they require curricular and instructional modifications beyond those typically offered in the standard curriculum. In order to provide suitable services to gifted and talented children, it is necessary to recognize their needs and abilities through appropriate identification procedures.

Principle 2

Identification instruments and procedures must be matched with the program provided to gifted and talented students.

The identification instruments and procedures used are intimately related to the type of services being offered to the gifted and talented. Throughout the country, program options for gifted students have been developed in the general academic, specific content, affective, social, fine arts and leadership domains. Despite this diversity, many programs continue to utilize IQ and achievement scores as the main criteria for final program selection. These formal instruments, however, generally measure the types of abilities which are manifested in the traditional school curriculum. In order to adequately provide services related to other areas, it is necessary to utilize identification procedures which assess students' abilities in those areas. For example, a visual arts program which utilizes achievement test scores as the major selection criterion will miss students who may be highly creative but obtain low cognitive test scores. Some of these missed children might be the ones with the greatest need for the services. In addition, educators might need to lower the quality of the program in order to accommodate the accepted students who obtained high cognitive test scores but who have low visual arts skills. Thus, it is important to match the identification instruments and procedures with the program being offered.

Principle 3

Giftedness is a relative rather than an absolute concept.

The curriculum used to meet the needs of gifted/talented children provides educational experiences not ordinarily offered in the regular school curriculum. Because the regular curriculum differs around the state, the gifted/talented curriculum and program options differ among school corporations. This allows school corporations to recognize and respond to the needs of gifted children relative to local rather than statewide conditions. The level of performance used to qualify a child for a gifted program in one school or corporation may

be different from that of another school or corporation. Hence, a child who would be included in the gifted program in one corporation might not be in the program in another corporation.

Principle 4

The identification process should include procedures for identifying all of those who demonstrate, and all of those who have the potential to demonstrate, high performance in one or more areas of giftedness.

To serve those with the potential for demonstrating gifted behavior, identification procedures must be equitable toward those who differ from the majority population in race, ethnicity, social class, geography, gender, physical abilities, appearance or social-emotional behaviors. Society needs the contributions of all gifted people within our racial and ethnic minority groups, female and handicapped populations, rural communities and among the poor.

Principle 5

The identification of gifted and talented students requires the utilization of formal and informal measures obtained from many sources in a wide variety of settings.

Educational institutions often view giftedness as a single trait represented by an IQ or achievement test score. This is unfortunate because an absolute concept of giftedness based on intelligence test scores does not take into account the manner in which a student will demonstrate other behaviors such as creativity, motivation, leadership skills and the like (Treffinger & Renzulli, 1986). Formal intelligence, aptitude and achievement tests typically measure general experiences and the kind of textbook knowledge constituting the traditional school curriculum. As a result, they are useful mainly for predicting performance in the conventional school setting. In addition, they assess children's performance at a single point in time rather than across a span of time. Thus, other types of input are also necessary to assess adequately the needs and abilities of the gifted. For example, students with poor formal test scores who exhibit their abilities through creative writing, inventions, musical, artistic or leadership abilities would be denied admission to a gifted program unless evaluations of creative products, inventions and performances are valued as highly as IQ and achievement test scores.

High performance in one or more areas of giftedness may be manifested at home, in the community or at school. Examples of organizations where special attributes may be demonstrated include: boys and girls clubs, 4-H Clubs, community centers, Boy and Girl Scouts, community orchestras and drama societies, and small personal businesses. Some individual students might share in-depth pursuits only with family members. It is, therefore, essential to obtain input about students not only from educators but also from parents, employers, youth workers or others who have had the opportunity to observe outstanding out-of-school behaviors.

Principle 6

Identification of gifted and talented students is an ongoing process.

While formal identification procedures should take place at specified times, teachers should be on the alert to identify students with promise at any time. Varying kinds and degrees of gifted behavior may be displayed by certain people at certain times and under certain circumstances (Renzulli, 1986). For instance, students who are handicapped or who come from economically disadvantaged homes may require a period of nurturing before their special abilities emerge. Other students may move into the school district in the middle of the school year. The identification process should be sufficiently flexible to allow students to enter or leave the gifted program as circumstances and their educational needs dictate.

Principle 7

Gifted/talented students should be identified as early as possible in their educational careers.

The regular school curriculum is inadequate to meet the needs of the gifted and talented. These students frequently are bored and frustrated by the regular curriculum. Many gifted/talented students respond to this situation by dropping out of school, underachieving, becoming disruptive in the classroom, developing behavioral problems or generally failing to reach their full potential. Appropriate educational experiences, which are provided by gifted/talented education, can help to alleviate these problems. The longer gifted/talented students receive education that does not meet their needs, the more likely they are to develop such problems, and the more difficult the problems are to correct or counteract. Therefore, the earlier gifted/talented programs are provided to students, the more likely they are to have a positive effect.❑

INDIANA REGULATIONS

The state regulations concerning identification of gifted/talented students, as adopted by the Indiana Board of Education on January 1, 1988, are as follows:

511 IAC 6-9-1:

(a) "Aptitude" means an innate ability, talent, or capacity for learning or performance.

(b) "Gifted and talented child" means a child, including a pre-school child, who requires services and educational experiences not ordinarily offered in the regular school curriculum to develop demonstrated or potential aptitude, leadership and creativity in either of the following areas:
  (1) Intellectual/academic, as evidenced by a superior aptitude for:
    (A) understanding facts, concepts, generalizations and their relationships;
    (B) reasoning; and
    (C) developing and evaluating ideas as they relate to a specific discipline;
  (2) visual or performing arts, as evidenced by a superior aptitude for:
    (A) demonstrating, through exhibition or performance, aesthetic, critical, historical and production aspects of dance, music, theater or the visual arts; and
    (B) understanding the arts, including knowledge, skills, generalizations and their relationships.

(c) "Standard school program" means a school curriculum that meets the requirements of the rules of the state board of education.

511 IAC 6-9-7:

(a) Every program shall establish a procedure for evaluating its effectiveness. The evaluation must be both summative and formative. The program must solicit evaluation input from administrators, teachers, counselors, parents, students, and community members.

(b) The evaluation must identify program strengths and weaknesses in the following areas:
  (1) student progress;
  (2) program design;
  (3) student needs;
  (4) learning environment;
  (5) program goals and curriculum;
  (6) student identification;

(7) personnel qualifications;
(8) resources;
(9) staff and community awareness; and
(10) cost effectiveness.

(c) The program shall submit a final report to the department.

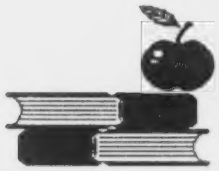
511 6-9-8:

(a) Programs shall select students based on program goals using the following procedures:
  (1) A screening committee shall identify the top 10-14% of student population by the use of:
    (A) student records, including grades and test scores;
    (B) parent, teacher, and student nominations;
    (C) teacher ratings;
    (D) student work products; and
    (E) other identification measures specifically designed to identify students from underserved population groups, such as minorities, learning disabled, culturally disadvantaged, and under-achievers.
  (2) A selection committee shall:
    (A) develop an identification matrix using a composite index to identify the top five (5) to seven (7) percent of the student population according to program goals; and
    (B) select appropriate educational services for each identified student based on student characteristics and needs.
  (3) A review committee shall:
    (A) hear student identification, placement and removal appeals; and
    (B) annually review identification, placement and removal procedures.

(b) Programs shall annually evaluate student placement using both standardized instruments and professional judgment.

(c) Programs shall establish procedures for changing the placements and removing students from the program based on parent requests and professional recommendations.

Chapter 3



Preparation for Identification Procedures

This chapter details planning which is preliminary to, but necessary for, the determination of identification procedures. Included are issues such as selection of:

- *coordinator and broad-based planning committee,*
- *categories of giftedness to be served,*
- *screening, selection and review committees, and*
- *evaluation procedures.*

COORDINATOR AND BROAD-BASED PLANNING COMMITTEE (BBPC)

In response to the identified need for a unique program for gifted and talented students within a given school district, a *coordinator* or *director* is appointed to guide the development of the program. Ideally, this person should be a full-time administrator with background and training in gifted education. The coordinator serves as the local expert on programs for gifted students and usually acts as the chairperson of the *broad-based planning committee* (BBPC). The BBPC assumes advisory and public relations roles and serves as a conduit between the community and the school system. The members of the committee might include parents, teachers, students, administrators, a school board member and local business representatives. Ideally, these members should also represent all socioeconomic, racial and cultural aspects of a given community. One advantage of having a BBPC is the expanded ownership that is created through community involvement in the program. The members of the BBPC, as representatives of the community, also ensure that the gifted/talented program meets local needs and desires. It is imperative that the g/t philosophy augments, and is an extension of, the corporation's philosophy for regular education.

As an advisory group, the BBPC assists the coordinator in formulating the philosophy, the goals and the general program description for the local gifted and talented program. In addition, this planning committee should identify the *category of giftedness to be served*. The committee may also help to determine the *instruments and procedures to be used* for selecting students for the program. (Selection of instruments and procedures is covered in detail in Chapters 4 and 5.)

It is beyond the scope of the ID Guide to detail all of the various philosophical models and program options available in the field of gifted education. A listing of viable program arrangements includes resource rooms, pull-outs, cluster groupings, mentorships and self-contained classrooms, among others. Instructional program descriptions may be found in Table 3 below. For further information on any of these program arrangements, contact any of the Shared Information Services (SIS) centers in Indiana. A listing of these is provided in Appendix D on page 211.

Table 3. Instructional Program Descriptions

Self-Contained Classes (Grades K-6)

Self-contained program for gifted/talented students in grades K-6 in which differentiated instruction is provided full-time by qualified teachers for the gifted; e.g., homogeneous grouping, cross-grade grouping, school within a school and magnet school.

Special Classes (Grades K-12)

Differentiated instructional services in grades K-12 provided for a minimum of 250 minutes (125 minutes for kindergarten) per student per week by a qualified teacher of the gifted; e.g., pull-out programs, cluster groupings, interdisciplinary groupings, seminars, dual-credit, accelerated courses, compacted courses, school within a school, magnet school.

Resource Center (Grades K-12)

Differentiated instructional services provided on a regularly scheduled or on an as-needed basis to students in grades K-12 in a designated room that is equipped with specialized gifted/talented materials and supplies. This center is staffed with a full-time, qualified gifted education resource person whose primary function is to work with gifted/talented students, teachers, counselors and administrators.

Mentorships/Internships/Apprenticeships (Grades 6-12)

A supervised and individually designed educational program in which students are assigned to work cooperatively with qualified adults who have a particular skill or area of expertise to accomplish specific learning objectives related to the students' areas of interest (oftentimes offered for credit and off-school site).

SELECTING CATEGORIES OF GIFTEDNESS TO BE SERVED

The Indiana Department of Education recognizes two categories of giftedness. According to the state regulations (511 IAC 6-9-1(b)):

"Gifted and talented child" means a child, including a pre-school child, who requires services and educational experiences not ordinarily offered in the regular school curriculum to develop demonstrated or potential aptitude, leadership and creativity in either of the following areas:

(1) Intellectual/academic, as evidenced by a superior aptitude for:
- **(A) understanding facts, concepts, generalizations and their relationships;**
- **(B) reasoning; and**
- **(C) developing and evaluating ideas as they relate to a specific discipline;**

(2) visual or performing arts, as evidenced by a superior aptitude for:
- **(A) demonstrating, through exhibition or performance, aesthetic, critical, historical and production aspects of dance, music, theater or the visual arts; and**
- **(B) understanding the arts, including knowledge, skills, generalizations and their relationships.**

It should be noted that these two categories of giftedness are not mutually exclusive. Although there is a positive relationship between all of these characteristics, the magnitude of the overlap is not yet known. In Indiana, local school corporations determine which one, or both, of these categories will be served. (If formula funding in gifted/talented education is implemented, state g/t funds would be provided for five percent of the student population of a school corporation that serves one category or seven percent if both categories are served.)

The issue of creativity as a separate category

Creativity is generally recognized as an important component of giftedness, as evidenced by the fact that a measure of creativity in one form or another is often included in a program's gifted and talented identification procedures. Rather than categorize creative children separately for instructional purposes, however, it is suggested that such children be integrated into gifted programs and that creative problem-solving and productive thinking opportunities be provided to all gifted students. This can be done through programs for either academically or artistically talented individuals.

The issue of leadership as a separate category

Educators often agree that leadership is an important quality to nurture in gifted/talented children. The acceptance of leadership as a separate category of giftedness requiring special programming, however, has gained little national support (O'Connell, 1986). It is suggested that, rather than viewing leadership as a separate category of giftedness, leadership development opportunities be provided to all gifted and talented students. In this way students in either intellectual/academic or visual/performing arts programs can develop their potential to assume leadership roles.

SCREENING, SELECTION AND REVIEW COMMITTEES

Indiana regulations (511 IAC 6-9-8) require that school districts have *screening* and *selection committees* to oversee the process of identifying gifted and talented students. Although these committees may be separate, in practice they often are combined into one committee, which meets on different occasions for the different purposes of screening and selection. For convenience, in the ID Guide they will be referred to as one committee (the selection committee). The selection committee generally is chaired by the gifted and talented program coordinator/director. The committee should represent various points of view on identification, several perspectives on programming (administration, coordination and instruction) and a balance among individual points of view. The members of the selection committee can serve the entire district, a single school, a single program option or an administrative grouping (e.g., all high schools or all elementary schools). In large districts, it may be quite difficult for a single central committee to make all identification and selection decisions. Subcommittees from each school could handle preliminary screening (nominations and data collections), and then forward names to the central committee for final decisions. Alternatively, the subcommittees in each school building might make actual decisions, but their membership would then include a representative from the central selection committee. In all districts, it is advisable for the program coordinator to function as a member of every committee serving a single school system.

A separate committee should be formed to handle identification appeals and reviews. Makeup of the review committee is similar to that of the selection committee. Membership between the committees may, in fact, overlap to a considerable degree. However, it is helpful to have some difference in membership to help assure objectivity in decision-making. Indiana's regulations (511 IAC 6-9-8) charge the review committee with two tasks:

(A) hear student identification, placement and removal appeals; and

(B) annually review identification, placement and removal procedures.

These activities are detailed in Chapters 5 and 9. At this point in the process, the most important task is to form the committees themselves.

PLANNING OF EVALUATION

Indiana 511 IAC 6-9-7 states:

> **"Every program shall establish a procedure for evaluating its effectiveness. The evaluation must be both summative and formative."**

Ten areas are identified for evaluation. Annual evaluation is required in two of those areas: student progress and identification procedures. It is important for plans to be made early for the evaluation of student identification.

The formative evaluation, which is an ongoing, year-round process, should be planned in detail by the broad-based planning committee. Procedures for a summative evaluation might be outlined but need not be planned in great detail at this point. (Refer to the glossary for definitions of formative and summative evaluation.)

Formative evaluation is designed to provide continuous feedback regarding strengths and weaknesses of a program. For example, at each of the steps of the identification process, the coordinator should collect feedback from participants. This feedback should answer questions about usability of data collection forms, clarity of instructions, timeliness of information, etc. In summary, formative evaluation is internal evaluation which serves to improve the process being developed.

Formative evaluation may be done in either a formal or an informal way. For example, the coordinator may decide to utilize questionnaires or surveys; feedback may also come from informal discussions in the teachers' lounge. Participants in the identification process also may write comments on the data collection forms regarding usability, length, clarity, etc. A log book could also be kept of positive and negative perceptions and recommendations for future procedures. Pre- and post-testing at teacher inservices might be another way to provide feedback to program coordinators. Regardless of which of these (or other) methods are utilized, the plans should be made at the beginning of the year so that formative evaluation may actually be conducted throughout the year.

Summative evaluation is generally performed at the end of the year; its goal is to assess the merits of a process or program which is already in place or completed. Summative evaluation is discussed in detail in Chapter 9.❑

Chapter 4

Selection of Instruments

Once the broad-based planning committee is formed, work can begin on selection of instruments to be used in the identification process. Indiana 511 IAC 6-9-8(A1) states:

(1) A screening committee shall identify the top 10-14% of student population by the use of:
- **(A) student records, including grades and test scores;**
- **(B) parent, teacher, and student nominations;**
- **(C) teacher ratings;**
- **(D) student work products; and**
- **(E) other identification measures specifically designed to identify students from underserved population groups, such as minorities, learning disabled, culturally disadvantaged, and underachievers.**

(2) A selection committee shall:
- **(A) develop an identification matrix using a composite index to identify the top five (5) to seven (7) percent of the student population according to program goals; and**
- **(B) select appropriate educational services for each identified student based on student characteristics and needs.**

Most experts in gifted/talented education recommend screening approximately twice the number of students to be served by the program. If formula funding in gifted/talented education is implemented, the Indiana Department of Education will provide funds for five to seven percent of the students in school corporations with gifted/talented programs. Hence, 511 IAC 6-9 specifies that 10 to 14 percent of students be screened, so that five to seven percent of the students may be selected for the program. School corporations may choose to serve a higher percentage of their students; however, formula funding would provide g/t funds for only five to seven percent of the students.

As noted in Chapter 2, it is important that identification procedures include standardized and nonstandardized measures obtained from many sources in a wide variety of settings. It is also important that the procedures be compatible with the program to be provided for the students.

The remainder of this chapter is divided into two sections: the first includes general characteristics of different kinds of instruments used in identification. The second section provides considerations for selection of instruments to ensure an appropriate match between learner needs and program content.

TYPES OF INSTRUMENTS

Educators generally refer to two types of instruments or procedures that are used to assess students: formal and informal. The term *"formal instruments"* generally refers to published, standardized measures that may be administered in a group or individual setting. The term *"informal"* may refer to either unpublished or published nonstandardized instruments. To avoid this confusion, the ID Guide uses the term *"published informal instruments"* only in reference to published, nonstandardized measures. Unpublished measures will be referred to as *"unpublished informal instruments."* Hence, *"informal instruments"* may be divided into those that are published and those that are unpublished. Formal measures may be seen as a separate category. The most commonly used formal instruments are listed in Appendix A; informal instruments are listed and illustrated in Appendix B. In Indiana, the local school corporation decides which instruments will be used to identify gifted children. Indiana, therefore, expects a combination of a variety of instruments to be used during the identification process. The most successful identification schemes include a combination of formal and informal instruments. The advantages and disadvantages of formal instruments are summarized in Table 4 on page 26. A summary of the advantages and disadvantages of informal instruments is in Table 5 on page 35. Detailed descriptions of both types of instruments follow.

Formal Instruments

Formal instruments are those that have been standardized in terms of a set of procedures. Each time a measure is administered, the questions are asked in the same manner. This permits a student's performance to be compared with a reference group. The reference group is usually called the *"standardization"* or *"normative"* sample.

One major advantage of formal standardized measures is that considerable time and expertise are employed in the test construction phase. The appropriateness of item formats, the representativeness of items and how well the collection of items covers the traits to be measured are scrutinized by panels of measurement and curriculum specialists. Other reasons to include formal measures in gifted/talented identification are:

- They provide data that allow comparisons to well-defined normative groups.
- Formal group measures allow screening of large groups of students.
- They can find students who are overlooked through subjective biases of teachers, parents or other nominators.
- They can provide indications of areas of weakness and strength.

The formal instruments that are most often used to identify gifted students fall into categories such as intelligence, achievement, aptitude and creativity tests. Although the stated purpose of each differs, they often overlap in the emphases and kinds of items each contains. The advantages and disadvantages of the different types of formal instruments are summarized in Table 4 on page 26. A list of formal instruments of all types is provided in Appendix A, along with a tabulation of how frequently each test is used in Indiana programs.

Examples of Formal Instruments

Intelligence/Cognitive Ability Tests

Intelligence tests are designed to provide an estimate of a student's general intellectual functioning and are most frequently reported in terms of a single score such as an intelligence quotient (IQ) or a school ability index (SAI). Some intelligence tests provide several indices: e.g., the Wechsler Intelligence Scale for Children-Revised (WISC-R) provides verbal, performance and full scale IQ scores. Intelligence tests may be administered to an individual or to a group of individuals. The individual test is administered to a single student by a qualified examiner. Individual testing is, of course, expensive and time-consuming, but it also provides the most accurate assessment of ability.

Group tests are paper and pencil tests that can be administered by untrained personnel to large groups of students. One of the major advantages of group intelligence tests is their cost-effectiveness. It must, however, be kept in mind that group tests may underestimate the scores of any child for many reasons. These include factors such as anxiety, illness or a poor testing environment. Because group tests generally have time constraints and require reading ability, fine motor skills and relatively long attention spans, they are not always suitable for use with certain handicapped or very young students (Kitano & Kirby, 1986; Whitmore, 1980). The procedures needed to identify young gifted students are addressed in the second section of this chapter; identification of handicapped gifted children is discussed in Chapter 6.

Both group and individual intelligence tests allow comparisons to national norms and provide information about performance relative to other children. However, the scores obtained on such tests do not provide the total picture of a child's potential or class performance. For example, two students with IQs of 130 may present entirely different content knowledge, interests, analytical skills or need for structure.

Cognitive ability tests (e.g., the Developing Cognitive Abilities Test) are similar to intelligence tests in that they measure general intellectual ability. Although expert opinions differ as to whether cognitive ability test scores should be considered to be intelligence scores, it is generally agreed that cognitive ability tests have the same advantages and disadvantages as group intelligence tests. Some cognitive ability tests have the added advantage of being designed specifically to assess the higher levels of Bloom's cognitive taxonomy.

Achievement Tests

Achievement tests are designed to measure the effects of programs of instruction or training. Like intelligence tests, they come in individual or group formats, and the strengths and weaknesses associated with administering group or individual intelligence tests also apply to achievement tests. There are some specific strengths and concerns in using achievement tests, however. The most obvious benefit to the use of these tests is that they provide information that is specific to a particular discipline and, thus, they can identify patterns of strengths and weaknesses in school-related performance. Such tests provide information as to whether a student is ahead, even or behind fellow students in instruction. Unlike the single score generally obtained on an intelligence test, a battery of scores

corresponding to school instruction are obtained on achievement tests. These tests also provide valuable clues as to the specific academic abilities a student may possess.

One potential disadvantage of achievement tests is that the school curriculum and the content tested by the achievement test may not match. For instance, second grade children might be tested on material that is taught in the third grade in their school corporation. This could result in low scores for the students who had not been exposed to the content on the instrument. Although large, national achievement test producers work to make their instruments reflect the scope and sequence common to the major textbook publishers, it is impossible to match the idiosyncrasies of every series and every school district. Thus, an important consideration in the selection of an achievement test is the match between the local curriculum and the content of the test.

In Indiana, the most commonly utilized achievement test is the ISTEP, probably because state law (PL 390-1987) requires the ISTEP to be given to all public school students in grades 1, 2, 3, 6, 8, 9 and 11. (See the glossary for a description of ISTEP.) When using ISTEP to select gifted students, it is important to remember that the measure was designed to assess *minimum profi-ciencies* of students rather than high level thinking skills and in-depth knowledge. ISTEP was developed and implemented in Indiana in order to discriminate among students who are having difficulty succeeding in the academic setting. The measure does not contain enough difficult items to assess adequately the full range of abilities of gifted children, including underachievers or learning disabled students. For these reasons, results of the ISTEP probably should be used only in the nomination stage of the identification process.

Aptitude Tests

Aptitude tests attempt to measure performances that are not specifically learned, but which reflect some inherent strengths, abilities or interests. It is a mistake, however, to assume that aptitude tests measure innate ability. All of the instruments discussed thus far are measures of ability to learn and exposure to learning. They differ in how closely they are tied to formally taught learning experiences. Achievement and aptitude tests both measure learning, but achievement tests are geared to the specific learning and skills taught in school. Aptitude measures are less closely tied to school experiences, but are still strongly influenced by exposure to stimuli that lead to learning. Aptitude tests might cover topics like mechanical, spatial, musical, verbal and quantitative abilities.

Some identification procedures may include both achievement and aptitude tests in the battery of instruments given to students. However, unless an aptitude test contains content that is distinctly different from that of the achievement test, it is probably not necessary to include both in the battery. In fact, most experts agree that aptitude tests are achievement tests (at least in the subtests which cover the traditional content areas of the regular school curriculum). On the other hand, it may be difficult to locate achievement tests which measure abilities in nontraditional areas, such as mechanical and spatial abilities.

Where aptitude scores are available, they can be used effectively. For example, the

Scholastic Aptitude Test (SAT), used off-level in talent search examinations that target junior high-aged students, can indicate high current and potential performance in math or verbal areas. One should not, however, assume that low scores on such batteries are absolute indications of low inherent ability.

Creativity Tests

Creativity tests attempt to measure the abilities of individuals to generate new or unique solutions to problems. The most widely used formal tests of creativity include the Torrance Tests of Creative Thinking (TTCT), the creativity subtest of the Structure of Intellect-Learning Abilities Test (SOI-LA), the SOI Gifted Screening Form and Guilford's Creativity Test for Children.

Authors of major standardized creativity tests differ in their approaches to measurement. Some use tasks that measure specific, distinct behaviors that relate to divergent thinking. Others measure creativity as the result of complex tasks that require simultaneous application of many possibilities. Both types of tasks measure fluency, flexibility, originality and elaboration as demonstrations of creativity.

In selecting instruments for the identification of gifted students, it is wise to remember that creativity tests measure some traits not measured by intelligence or achievement tests. However, correlations between creativity and IQ scores tend to be fairly high (approximately .50). Research has found that students with high IQ scores also tend to have high scores on creativity tests. The reverse may not be true, however: high scorers on creativity tests do not necessarily have high IQ scores. Intelligence and achievement tests are better predictors of school success than are creativity tests. On the other hand, creativity tests are useful in identifying students from underserved populations, such as underachieving and minority children. An added advantage of creativity tests is that they may be a part of the battery used to select students for both intellectual/academic and visual/performing arts programs, because creativity may be addressed in the curriculum of both types of programs.

The major disadvantage of creativity tests is that generally they are time-consuming to administer and difficult to score and interpret. Despite the existence of national norms, scoring is often seen as subjective and somewhat arbitrary. Batteries of creativity tests tend to have fairly good reliability, but individual subtests do not. In addition, the ability of creativity tests to predict creative production has been questioned.

Problems with Formal Measures

Assumptions Underlying Test-Taking

Test constructors tend to make certain assumptions about test takers. These include assumptions that test takers:

- have had comparable opportunities to be exposed to mainstream American acculturation experiences,
- use and understand standard English,
- have the prerequisite, school-related fine motor skills to perform the task required by the test (e.g., tracing a maze, copying a circle, drawing a line from the bone to the dog),
- are aware of the time constraints of tests and understand the penalties and rewards for slow or fast performance, and
- tend to respond favorably to verbal reinforcement.

Although many white, Euro-American, middle-class children are likely to meet these assumptions, those from different racial and ethnic backgrounds, and those who are handicapped or economically disadvantaged, may not. Extreme care must therefore be exercised when using formal instruments with special populations. Chapter 6 addresses these problems in greater detail.

Ceiling Effects

The upper limit of a test is known as its *ceiling*. The ceiling of a test is an important consideration in deciding whether to use the test to identify gifted students. When a test has *limited ceiling*, it means that there are not enough difficult questions: i.e., it is too easy. A test with a *ceiling effect* fails to discriminate among students with high ability.

Because the majority of formal instruments are constructed with most questions aimed at the performances of the average child, few questions exist in the battery to test high performers. Two items correct at the upper level can change a score markedly, but a change of two items at the middle range of the distribution will have little or no effect on the obtained standard score. Therefore, one is less confident that there is a real difference between students with IQs of 135 and 140 than between those with scores of 100 and 105.

Some test manuals only provide norms up to a certain level, which may not be high enough for gifted/talented students. These cases are easy to recognize because a disproportionate number of students will score in the top 95th to 99th percentile range. For example, there is no differentiation between students who score at the 99th percentile and those who score at the 99.9999 percentile (the top 1% versus the top .0001%). All of these students are given the same score (99th percentile). Thus, one effect of a limited ceiling is to lower the scores of high ability students.

It is also important to understand that test manuals report standard scores that are higher than the actual ceiling of the test. For example, although the Otis-Lennon School Ability Test reports scores as high as 150, its ceiling is much closer to 130-135. In other words, even though the published norms go to 150, the test does not have enough difficult items to be accurate above 130-135.

Off-Level Testing

One problem with achievement testing is that many gifted students are several grade levels ahead of their peers in academic achievement. To compensate for this effect, school systems sometimes test students on higher levels of the test. This is known as *off-level testing*. The reason for off-level testing is that a gifted child often has little difficulty answering the vast majority of questions correctly on a test appropriate for his/her grade level. By having a child take a level designed for a higher grade, more challenging items are presented. This allows the child to demonstrate the upper limits of his or her knowledge or skills, a determination that otherwise may not be possible.

Scores generated in off-level testing, however, may be difficult to interpret (Archambault, 1983). Some test manuals provide either no norms at all or interpolated norms for comparing children tested off-level. Thus, it is difficult to know what the scores mean. The principle point of identification is to find a comparable basis to contrast all children together. If different material is used between children, then comparison is difficult.

Despite these problems, off-level testing is sometimes the best formal procedure for testing the upper limits of a child's academic knowledge at a particular point in time. Although off-level testing is a viable option for identification of gifted/talented students, it may be more helpful to utilize this procedure after children have been identified, as an aid to help individualize teaching (e.g., to help determine which material may be compacted for a particular student). Off-level testing can also be useful for evaluation of a student's progress (e.g., pre-post testing). In addition, off-level tests (i.e., the Scholastic Aptitude Test) have been used effectively in talent search programs, such as the Midwest Talent Search.

Considerations for Selection of Formal Measures

Appendix A provides a listing of some of the most widely used formal instruments. Some considerations to be taken into account when selecting formal instruments include:

- match between program and instrument content,
- cost and availability,
- ease of administration, scoring and interpretation,
- training level required for administration, scoring and interpretation,
- adequacy of instrument's standardization sample, reliability and validity,
- ceiling, and
- scores provided (e.g., single vs. multiple scores).

Table 4. Advantages and Disadvantages of Formal Instruments

	Advantages	Disadvantages
Formal Instruments	Vast resources, expertise and money employed to develop tests Nationally standardized norms (can make local, regional and national comparisons of students) Group measures allow for testing of large numbers of students at one time Objective format Provide quantitative scores Generally high reliability and validity Fair to good prediction of school performance and success	Instruments cannot be adapted to fit local situations May be culturally biased May have low ceilings May be expensive and/or require high level of training to administer, score and interpret test Provide a single or, at most, a few scores Based on assumptions about test takers Difficult to interpret when given off-level Sample limited aspects of student ability and behavior Group instruments may not be suitable for handicapped or very young students
Individual Intelligence Tests	High reliability and validity Large research backing (e.g., some norms or alternate forms developed for different cultural groups) May be able to adapt for handicapped students Some have high ceiling levels or provide multiple scores	Expensive to purchase Time-consuming to administer Require extensive training to administer and interpret Sample limited aspects of cognitive skills Generally do not allow for divergent responses

Table 4. Continued

	Advantages	Disadvantages
Group Intelligence and Cognitive Ability Tests	Cost-effective Fair to good reliability and validity Require little or no training for administration and interpretation Often already administered to all students in school at some grade level Some are designed to assess higher levels of Bloom's cognitive taxonomy	Generally provide a single index of ability (IQ score); cannot assess student's cognitive strengths and weaknesses Generally test only verbal or culturally acquired skills Generally do not allow for divergent responses May have low ceilings May need to send away to have tests scored
Achievement Tests	Provide a battery of content-specific scores Cost-effective (group format) Require little or no training to administer and interpret Fair to good reliability and validity Good predictors of school performance and success Usually already given to all students in various grade levels	Content of test may not match curriculum in a particular school or grade level May need to send away to have tests scored Do not allow for divergent responses Generally test only verbal or culturally acquired skills Low ceilings

Table 4. Continued

	Advantages	Disadvantages
Aptitude Tests	May measure ability in nontraditional content areas Cost-effective (group format) Require little or no training to administer and interpret Fair to good reliability and validity	Measure same abilities as achievement tests in traditional content areas Do not allow for divergent responses May need to send away to have tests scored Low ceilings
Creativity Tests	Measure traits not assessed by other formal tests (divergent thinking) May be used for both I/A and V/PA programs Useful with minority and other underserved populations	Do not predict school success as well as other formal tests Time-consuming to administer Scoring may be subjective and arbitrary Questionable ability to predict creative production

Informal Instruments

Informal instruments include all of the different types of nonstandardized measures. These may be either *published* or *unpublished*. Informal instruments are listed and illustrated in Appendix B. Advantages and disadvantages of the different types of informal instruments are summarized in Table 5 on page 35.

Published Informal Instruments

Published informal measures are instruments that have been published but have not been standardized on a national population sample. Therefore, in contrast to standardized measures, the test user is free to add or modify items because the test results are not derived from a comparison to a reference group who took the identical test. Whereas changing the test "violates" standardized procedures in the case of a formal test, making changes to the published informal test is permissible. It is also permissible to use these instruments as they were originally published.

One advantage of published informal instruments is that they can be adapted for use by various groups such as teachers, parents, students, peers, etc. Modification of published informal instruments, however, permits only local comparisons (comparisons within the group of students being assessed).

Examples of Published Informal Instruments

Rating Scales

Behavioral rating scales ask an observer to evaluate the degree to which a student demonstrates certain behaviors or characteristics. Ratings frequently range on a scale from 1 to 5, although other scales (e.g., 1 to 10) are sometimes used. The ratings then are totaled for a composite score on the scale. Raters may be teachers, parents, students, peers or other interested persons who can observe students and, therefore, have a basis for making evaluations. The Renzulli et al Scales for Rating the Behavioral Characteristics of Superior Students (generally known as the "Renzulli Scales") are the most commonly used rating scales in Indiana, as shown in Appendix B. The list of characteristics of gifted/talented students provided on page 5 could also be used to form a rating scale.

Checklists

Checklists are similar to rating scales, but rather than assigning a score to a student, the observer simply indicates whether or not certain behaviors are present (i.e., "yes" or "no"). The student's score consists of the total number of behaviors that have been marked present ("yes"). The DeHaan Checklists are a well-known example of published checklists. The list of characteristics of gifted/talented students provided on page 5 could also be used to form a checklist.

Problems with Published Informal Measures

Instrument Errors

In adapting a published informal instrument, users may inadvertently omit important questions or phrase questions in an ambiguous manner. The original authors of published informal instruments generally have done a significant amount of research in order to develop the instruments, including the phrasing of questions, answer format and so on. It is likely, therefore, that locally adapted informal instruments will contain more error than the original form of the instruments, although they may be more practical in other ways. In general,

informal measures are more subject to low reliability and validity than are formal instruments, and do not have the advantage of having national norms for comparison purposes. Thus, sometimes it is difficult to determine "how high is high" when looking at scores from informal measures.

User Errors

The person(s) using the instrument may be a source of error. All raters should share a common definition of the trait being observed; have a common frame of reference concerning what constitutes superior behavior or production; be sensitive to personal biases; have adequate time to observe the behaviors called for by the instrument and be thoroughly trained in the use of the instrument. Inservice training may help to achieve these goals (see Chapter 7).

Considerations for Selection of Published Informal Measures

Appendix B provides a list of some of the most widely used published informal instruments. Selection of published informal measures requires many of the same considerations as selection of formal measures. Some of the most important considerations for use of published informal instruments include:

- match between program and instrument content,
- ease of administration, scoring and interpretation,
- training level required for use of the instrument,
- length and format (1-5 rating scale vs. checklist), and
- ability to be adapted to fit local needs as necessary.

Unpublished Informal Instruments

Unpublished informal measures can provide information that cannot be obtained from published formal or informal measures. For instance, student products and performances and teacher observations may be obtained in a variety of settings and contexts. Unpublished informal measures also may provide clinical and developmental information not otherwise available. Such information can come from any person who has the opportunity to observe a student's daily performance, including teachers, parents and peers. Unpublished informal measures may include (but are not limited to) locally constructed tests, grades, rating scales, biographical information, nomination procedures, product ratings, auditions and portfolios. Each of these is discussed below, and samples of each may be found in Appendix B.

Examples of Unpublished Informal Instruments

Locally Constructed (Classroom) Tests

Classroom test performance is usually a major consideration in determining student grades. Although most formal measures are subject to stringent statistical procedures to insure reliability and validity, teacher-made tests rarely are. This means that classroom tests may include ambiguous items of questionable validity.

Another problem is that classroom tests generally are designed for purposes other than identifying gifted behavior. Such tests assess content mastery in a specific classroom and are directed to the average student in the room. It is unlikely that there are sufficient items to differentiate among those with the greatest ability. It is unwarranted to place too much confidence in these instruments for the purpose of selecting students for a gifted/talented program.

On the other hand, it may be possible to get a rough idea of the limits of a child's abilities by giving them a classroom test or task from another, higher grade level. This is analogous to off-level testing with formal instruments. Educators electing to use this option should exercise extreme caution for many of the same reasons as they do for off-level testing with formal measures. Interpretation of scores is difficult; use of this procedure should probably be limited to nomination purposes only (i.e., nomination of individual students to a "pool") or for individualization of teaching after students have been selected.

Student Grades

Many school districts utilize student grades in their selection procedures. Grades are intended to represent the level of a student's competency and classroom performance. In reality, however, grades often reflect perceptions of appropriate classroom behavior rather than academic performance.

There are some benefits to using grades as part of the selection procedures. Students who obtain high grades are likely to possess strong task commitment, achievement motivation and organization skills. It is unlikely that a straight "A" student will be overlooked for consideration to a gifted program. It is quite likely, however, that a student with high formal test scores but low grades will not be considered for the program. Such an oversight could be a serious omission since underachievers, the learning disabled and the acutely bored can all show this profile. While it is true that past performance is the surest measure of future performance in school settings, it is also true that gifted programs can change that setting sufficiently to occasion a new performance history.

Rating Scales

Unpublished rating scales are constructed locally and are analogous to published informal rating scales. The major advantage that they have over published scales is that they are designed to fit local circumstances. Locally constructed rating scales generally have the same disadvantages as published rating scales that have been adapted to fit local needs.

In adaptation or construction of rating scales, it is important to remember that such instruments generally require a frame of reference by the rater as to what constitutes high performance at various age levels. Observation instruments are only as good as the specificity and observability of the behavior. When elements are used that are defined totally subjectively, then the efficacy of the instrument suffers. For example, a scale might ask a rater to judge whether a particular child is "alert beyond his years," or "sees unique and unusual solutions to problems." This type of characteristic is difficult for some raters to assess.

Nomination Procedures

Nominations are being considered in a separate category from ratings and observations since they do not necessarily entail more than the submission of a name for consideration. They are, in effect, a dichotomous "yes" or "no" from the nominator. This type of nomination may be a formal note on the suitability of a candidate for the program, or it may be a submission of a list of names for consideration or the submission of a single name for consideration.

There are some drawbacks to this procedure. Teachers who are asked to submit candidates' names, or who are asked to vote on the suitability of a slate of names generated from other sources, may overlook

students who have characteristics that violate stereotyped expectations about gifted students. Teachers also may tend to nominate students whose behavior fits their perceptions of appropriateness (the "teacher-pleasers"), or whose behavior is so disruptive that the teacher would like to pass them on to other teachers. Experience shows that inservice can help to overcome these problems. Teachers can furnish valuable and valid evidence in the identification process when equipped with knowledge of the unique characteristics of highly able students.

Other sources for nominations include parents, peers and the students themselves. Parents are good sources of information, particularly in reporting out-of-school interests, activities and achievements of their children. Peers can also report on behaviors seen in settings in or outside the classroom. Peer nominations (sometimes called *sociograms*) tend not to be reliable until students have reached the third grade. Highly gifted or socially isolated students tend not to be identified by their peers; however, peer nominations may be particularly useful in identifying culturally diverse gifted students. Finally, students may be allowed to nominate themselves. Students who want to be involved in the program show interest and motivation. Self-nominations are most useful for secondary gifted/talented programs.

Biographical Information

Another source of information comes from anecdotal or biographical data that illustrates the characteristics of giftedness or talent. Biographies are sometimes requested from parents, teachers or students. Most often, students are asked to provide biographies to assess their interests and awareness of the goals of the program, and to provide incidental evidence of writing ability and task commitment. It is important, however, for reviewers to base comparisons on the content or ideas presented rather than on handwriting, grammar and spelling.

Other types of biographical data may be useful for selection purposes. For example, students may list academic awards, extracurricular activities, community service, jobs and so on, as evidence of motivation and academic excellence. These are particularly useful indices for secondary programs and for selecting students from underserved populations.

The major disadvantage of biographical information is that it provides qualitative rather than quantitative information. It is difficult to compare students based on such data. On the other hand, biographical information can help provide a more complete "picture" of students than otherwise would be possible.

Student Products and Portfolios

Product samples provide examples of actual student performance. Products may be obtained in several different ways:

- Request nominated students to supply examples of stories written in class, social studies projects, science fair entries, media fair projects, 4-H exhibits, outcomes of library research assignments, crafts, hobby show exhibits, art projects, speeches given in contests, etc.
- Request nominated students to supply an example of work based on a specified topic. For example, an essay about why

students wish to be in the program can document motivation and expectations as well as writing ability. Work samples also can be obtained from other types of media, such as videotapes, music, sculpture, etc.

- Request students of all ability levels to supply an example of work based on a specified topic. The resulting products could be compared to each other and students producing outstanding examples would be noted.

Portfolios contain multiple examples of student products, usually obtained over a period of time. The use of products and portfolios in the identification process allows students to demonstrate higher-level thinking skills and creative thinking. As with all qualitative measures, the rating of products is subjective and therefore reliability is low. The reliability may be improved, however, by providing training to reviewers.

Auditions and Interviews

Auditions and interviews are another source of actual student performance. Interviews with candidates can provide evidence of verbal ability, insight and sensitivity to others. Auditions may be particularly useful for performing arts programs. The major disadvantage of auditions and interviews is that they are time-consuming to conduct, because they usually are done with each student individually. In addition, ratings are subjective and, therefore, reliability is low. One interesting option for rating student products, portfolios, auditions and interviews is to have a local "expert" in the field (such as a professional artist) judge their quality. This has the added advantage of increasing community involvement in the gifted/talented education program.

Problems with Unpublished Informal Instruments

In addition to questionable reliability and validity, the major disadvantage of unpublished measures is their subjectivity. For example, student grades are based on a subjective assessment of performance in the classroom. Another teacher in the same classroom might give the same student a different grade. However, this subjectivity can also be seen as an advantage: subjective measures provide a more comprehensive "picture" of the student than do objective measures. Subjective measures also are helpful in assessing the abilities of racial minorities and other groups that may obtain low scores on traditional objective measures.

Considerations for Selection of Unpublished Informal Instruments

Appendix B provides examples of some unpublished informal instruments. Considerations for use of unpublished informal instruments include the following:

- availability and ease of use of the measure,
- match between program and instrument content,
- usefulness (information provided is not obtained from other sources), and
- usefulness in identifying underserved students (e.g., racial minorities, handicapped, underachieving, etc.).

Other Instruments

A word should be said about the use of interest, learning style and self-esteem (or self-concept) measures for identifying gifted students. Some theoretical models of giftedness (e.g., Renzulli, 1978) propose task commitment or motivation as one component of the concept of "giftedness." Interest inventories are sometimes used to measure student motivation to learn a certain subject. However, it should be noted that interest in and of itself has not been posited as a defining characteristic of giftedness or talent. Many students may be interested in learning to play the piano, for example, but that does not make them talented in that field. Therefore, it is recommended that interest inventories be used for determining classroom activities and for student counseling rather than for determining students to be placed in a gifted program.

Likewise, self-concept has been proposed as a component of "giftedness" (Feldhusen, 1985). However, it would be a mistake to utilize self-concept scales to identify gifted students. Most child self-concept scales are oriented to assessment of youth in general rather than assessing the unique qualities that combine in the self-concept of gifted children. Further, simply because children see themselves as being highly able in a particular area does not mean that they actually are (or are not) talented in that area. Likewise, a student may have a talent but have low self-esteem. Feldhusen (1986), in fact, has argued against the use of self-concept scales for the purpose of identifying students for gifted programs.

Finally, measures of student learning style are not recommended to identify gifted children. Learning style has not been proposed as a component of "giftedness" or "talent." Gifted children, like all children, have a full range of learning styles; a child's preferred style of learning does not indicate the level of his/her abilities. It is suggested that measures of student learning style be utilized to determine teaching techniques and classroom activities rather than to identify gifted students.

Table 5. Advantages and Disadvantages of Informal Instruments

	Advantages	Disadvantages
Published Informal Instruments	Often research-based; questions developed by experts May be adapted for use by various groups Easy to administer, score and interpret Provide quantitative scores from subjective data Useful for identifying students from under-served populations	Modifications permit only local comparisons Adapted versions may include ambiguous questions or other forms of error Generally fair to low reliability and validity May require training for reliable use
Unpublished Informal Instruments	May provide information not otherwise obtainable Provide subjective data for a more complete "picture" of student May be used with multiple information sources Often easy to administer, score and interpret Useful for identifying students from underserved populations Designed to fit local needs and situations	Generally fair to low reliability and validity May require training for reliable use Permit only local comparisons May include ambiguous questions or other forms of error

Table 5. Continued

	Advantages	Disadvantages
Rating Scales and Checklists	Designed to assess directly traits of gifted/talented students May assess skill areas such as motivation and leadership May be designed or adapted to fit local needs and situations Parents can report on out-of-school behaviors	May require training for reliable use May include ambiguous questions or other forms of error May require large amounts of time to complete
Locally Constructed (Classroom) Tests	Directly relate to local curriculum May be useful for off-level testing to determine limits of student's abilities	Designed to assess performance of average students in regular classroom (i.e., low ceilings) May include ambiguous items of questionable validity
Student Grades	Predictive of future school performance and success Easily understandable, readily available for all students Global rating of student achievement	May reflect classroom behavior rather than ability and performance Highly subjective, low reliability

Table 5. Continued

	Advantages	Disadvantages
Nomination Procedures	Easy to obtain Parents and peers can report on out-of-school behaviors Useful for identifying culturally diverse students Self-nominations useful in secondary programs	May overlook students who do not meet stereotypes of "giftedness" May nominate primarily "teacher-pleasers" or disruptive students Little information provided ("yes" or "no" rating)
Biographical Information	Provides information not obtainable elsewhere Provides subjective data for more complete "picture" of student Useful for identifying students from underserved populations Useful in secondary programs	Qualitative data, cannot objectively compare students Cannot compute into individual composite score for use in matrix or T-Scores (see Chapter 5)
Student Products & Portfolios	Provide actual examples of student performance Can be obtained from all students for local comparisons Portfolios provide examples of performance or progress over time Allow students to demonstrate higher level thinking skills and creativity	Ratings may be subjective, low reliability Can be used for local comparisons only
Auditions & Interviews	Provide actual examples of student performance Interviews provide assessment of motivation, verbal ability and insight Auditions particularly useful for performing arts programs	Ratings may be subjective, low reliability Interview questions may be culturally biased; require strong verbal skills Can be used for local comparisons only Time-consuming to conduct

CONSIDERATIONS FOR SELECTION OF INSTRUMENTS TO ENSURE AN APPROPRIATE MATCH BETWEEN LEARNER AND PROGRAM

This section is devoted to a discussion of instruments used to identify gifted students for particular types of programs. First, programs for *general age groups* are discussed followed by an analysis of selection procedures for *intellectual/academic programs*. Finally, procedures for *visual and performing arts programs* are presented. The recommendations for all of these types of programs are summarized in Table 6 on page 48.

Age Levels

Preschool/Primary Grades (PreK-Grade 3)

Indiana Rule 511 IAC 6-9 encourages school corporations to serve students in grades K-12. All LEAs are expected to be working toward this goal through a five-year plan. The earlier gifted children are provided appropriate educational experiences, the better are their chances of fully reaching their potential. Yet despite the benefits that can be derived by early programming, few primary programs and even fewer preschool gifted programs are offered in Indiana or around the country (Jenkins, 1979). One of the reasons for this is that reliable identification can be a problem at young ages. Many test scores do not predict accurately the future school performance of very young students. For example, students who can read when they enter kindergarten or first grade might be considered "gifted" in a particular class. Yet within two or three years their peers may have caught up and even surpassed their reading performance. This may be seen as a problem because some of the students initially identified as "gifted" will later be ineligible for the program, and others not originally selected will take their place. However, it should be remembered that the purpose of identification is not to label children; the purpose is to provide for the educational needs of advanced students. Thus, students may need services beyond those offered in the regular curriculum at one age but not at another. Other principles pertaining to early childhood gifted identification are given below:

- Formal tests are highly unreliable with young children. Test scores may vary as much as 40 IQ points from preschool testing through adolescence.
- Group tests of intelligence, in particular, are highly unreliable with young children and are not recommended.
- Readiness tests do not have sufficient ceilings to assess the potentials of gifted preschoolers.
- If formal measures are desired by the corporation, individual assessment instruments such as the Stanford-Binet, WPPSI, WISC-R, TEMA or TERA-2 are recommended.
- Parent information is one of the most reliable sources of data on preschool gifted children if the information requested is geared to describing the child's present

behaviors. Parent information about a child's past behavior, such as onset of talking or walking, is generally unreliable. Rimm's Preschool and Primary Interest Descriptor (PRIDE) is exceptionally reliable as a parent report instrument. (See representative items in Sample 1 on page 40.)

- The behaviors of preschool children are in a rapidly evolving stage. It is, therefore, recommended that identification involve structured teacher observations over an extended period of time in a trial program or in a regular preschool or primary grade setting. The Karnes et al. (1978) Preschool Talent Checklists for teachers are particularly useful for this purpose. (See representative items in Sample 2 on page 41.)

- Other data generated over a period of time, such as portfolios, also may be helpful. Teachers can also utilize classroom assignments and activities that emphasize high-level thinking skills and compare the resulting student products.

Sample 1. Sample Items for Dimensions of PRIDE

Dimension	Item
Many interests— High scorers are curious and ask questions. They show high interest in learning, stories, books and things around them. Low scorers show less curiosity and have fewer interests.	My child seems to like to think about ideas. My child likes to take things apart to see how they work. My child gets very interested in things around her/him. My child likes to try new things.
Independence/Perseverance— High scorers play alone and do things independently. They do not give up easily and persevere even with difficult tasks. Low scorers tend to prefer easier tasks and are more likely to follow the lead of other children.	My child gets interested in things for a long time. * My child gets bored easily. * My child usually does whatever other children do. My child likes to pick his/her own clothes to wear to school.
Imagination/Playfulness— High scorers enjoy make-believe, humor and playfulness. Low scorers tend to be more serious and realistic.	My child spends much time playing make-believe. My child and I make jokes together. My child likes to play out in the rain. My child often says things that are funny.
Originality— High scorers tend to have unusual ideas and ask unusual questions. They are inventive in their art and play and tend to think differently than other children. Low scorers' ideas and art work appear to be more typical of children of similar age.	My child asks unusual questions. My child has unusual ideas. My child seems to do things differently than other children. My child often points to unusual things around her/him.

* Negatively scored.

(Reprinted from Rimm, 1984, p. 185.)

Sample 2. Preschool Talent Checklists

Date:_____ Classroom:_____

Observer:_____

A. Strongly Agree
B. Agree
C. Neutral
D. Disagree
E. Strongly Disagree

	Names and Ages of Children										
Is highly alert and observant											
Demonstrates exceptional retention of material presented											
Is very curious about a great variety of things											
Is often absorbed in activity											
Learns easily and readily											
Conveys ideas exceptionally well											
Demonstrates advanced ability to apply knowledge in practical situations											
Knows about many things of which other children his or her age are unaware											
Demonstrates advanced under standing of advanced relation-ships (e.g., cause & effect)											
Demonstrates exceptional ability to solve problems											
TOTALS											

(Reprinted from Karnes & Bertschi, 1978, p. 116.)

Intermediate Grades (Grades 4-6)

Selection procedures for elementary programs are based on the same principles as for any other age group. That is, a variety of published formal and informal and unpublished measures should be utilized to identify students. In Indiana, the ISTEP achievement scores and Cognitive Skills Index (CSI) are the most frequently utilized formal scores. All other types of measures may be used, including other formal tests, rating scales, student grades, product samples, nominations, etc. Because many elementary programs emphasize process skills, it is suggested that the identification procedures include some measure of those skills. As with all programs, it is important that the selection procedures match the elementary program content.

Secondary Grades (Grades 7-12)

In many ways the procedures for identifying students in secondary school are the same as for elementary students. In both instances, a variety of instruments should be used. On the other hand, differences do exist between elementary and secondary school programs. The most important differences, and some implications for identification of gifted students, are outlined below:

- Secondary schools emphasize academic content. Therefore, it becomes less viable to identify students primarily on the basis of global predictor measures such as intelligence tests.
- Secondary teachers have less total contact with students and thus have less opportunity to observe patterns of behavior that could indicate giftedness.
- Students have a longer academic history. As a result, grades and school reputation will exert stronger effects on rating scales and nominations.
- Adolescence increases pressures for conformity. This may result in the phenomenon of an inner city boy masking his academic abilities to be accepted by his peer group or a girl hiding her mathematics abilities to appear more attractive to members of the opposite sex.
- Ceiling effects from standardized tests become increasingly evident as students progress through secondary schooling. This problem is exacerbated when inappropriate subtests are utilized in the decision-making process.

Given these differences, it is suggested that the emphasis shift to identifying specific academic aptitudes for secondary students. This can be done by using formal or informal instruments. Several good teacher checklists or rating scales are available in specific content areas (e.g., the DeHaan Checklists, the Purdue Academic Rating Scales and the Renzulli Scales). Recommendations for specific content areas are covered later in this chapter.

In addition, product sampling in each discipline is increasingly feasible at the high school level. As students get older, their products show an increasing resemblance to adult production, making judging and ranking easier. The faculty in secondary schools provide a coterie of experts and judges to do the work of ranking. Because a number of competitions and contests exist for this population that are directly related to discipline production (e.g.,

science fairs, creative writing contests, speech contests, etc.), products may already exist that can furnish evidence in the identification process. Other useful sources of information may include biographical data, student grades, peer and self-nominations, and the like. Student proposals for independent study projects are another option. At the secondary level, students can and should be involved in selecting or designing program options to fit their own educational needs.

Needs of the Learner by Area of Giftedness

Intellectual/Academic Programs

General

Giftedness, to many people, conveys an image of extraordinary intellectual prowess. Many people who have not received training or inservice on the characteristics of gifted children complain that, "We don't have any gifted students in our school/community." These complaints generally stem from a conception of gifted students as child prodigies or budding Einsteins. Such a view fails to take into account the educational needs of the more "garden-variety" gifted student. Fortunately, many school districts are moving beyond the conceptualization just described and are offering programs to more adequately meet the needs of most gifted students. One of the more common approaches, particularly at the elementary level, is the general intellectual/academic program.

General intellectual/academic programs usually identify students who are gifted "across the board" rather than in specific content areas. Therefore, the selection procedures place heavy emphasis on global measures such as overall intelligence and achievement test scores. However, it should be remembered that these types of tests do not measure abilities such as divergent reasoning and critical thinking. Since most general intellectual/academic programs do focus on the development of these skills, it is important that they be included in the identification procedures. Thus, the identification procedures for a general intellectual/academic program usually include some combination of formal measures of intelligence, achievement and aptitude; creativity tests; informal teacher and parent rating scales; nomination procedures; product samples and student grades.

Specific Content Areas

Many gifted/talented program options are being developed in specific content areas, such as math, science, language arts and social studies. It is important to match the identification procedures to the program content. At the elementary level, many school corporations have obtained good results by using the subtest scores of group achievement tests. For example, reading scores can be used for language arts programs, math scores for math programs, and so on. It is important to keep in mind, however, that subscores usually are less reliable than are total scale scores. In addition, some subscales contain items that are not predictive or related to gifted characteristics (such as spelling and grammar items). Finally, the ceiling of subscales may be even more limited than that of the total instrument, since subscales contain fewer items. All of these factors should be taken into consideration when deciding to use subtest scores.

The situation becomes even more complex at the secondary level, because of the increased emphasis on specific content areas in secondary curriculum. Although use of achievement test subscores is still an alternative, many gifted secondary students have specific content knowledge that is too complex, in-depth and up-to-date to be adequately assessed by achievement tests. In short, the kinds of group tests usually given often have low ceilings, contain only general questions and may be inadequate to determine the educational needs of some gifted/talented students. For example, an achievement test math score may or may not be very helpful for discriminating the appropriate students for a computer math course because the ceiling of the test is too low and the test does not contain content directly related to computer math.

A number of formal tests have been developed in specific content areas; however, these generally are designed to assess the abilities of mentally handicapped or learning disabled students. Thus, they tend to have low ceilings and few difficult items. Some schools have found the Orleans-Hanna Algebra Prognosis Test to be helpful in identifying gifted middle school math students. Scholastic Aptitude Test scores of students participating in the Midwest Talent Search can also be beneficial in matching high abilities to program offerings.

Informal measures should also be considered when selecting instruments. Several rating scales or checklists have been published which contain subscales relevant to specific content areas. These include the Renzulli Scales (Communication Precision, Expressiveness); The Purdue Academic Rating Scales (Math, Science, English, Foreign Language, Social Studies); and the DeHaan Checklists (Scientific Ability, Writing Talent).

Student products can be particularly useful for selection purposes. For instance, science fair projects or student essays may help to find students with science or language arts abilities. Biographical information, interviews, student grades, self-nominations and student proposals for independent study projects all can provide helpful information. It is important to utilize as many sources as possible to obtain information about out-of-school as well as in-school behavior.

Visual/Performing Arts Programs

Visual Art

Identification of talent in any of the visual and performing arts is difficult because of the subjective nature of these fields. Selection procedures for a visual arts program may include some combination of student art grades, creativity tests, nominations, checklists and rating scales, interviews, portfolio or product reviews, and standardized art tests. The general characteristics of most of these types of instruments were reviewed earlier in this chapter. One of the most commonly utilized procedures is a review of student products or portfolios. This type of procedure is especially helpful because it provides actual examples of student work to be evaluated.

A few nationally available behavior rating scales and checklists for art-specific behaviors (e.g., Renzulli Scales-Artistic Characteristics, DeHaan Checklists Artistic Abilities) have been used successfully by programs in several parts of the country. These checklists can be used to rate students in all grade levels.

Though some people have claimed that visual and performing arts giftedness is closely associated with creativity, others have raised questions about this. Researchers have questioned whether creativity tests measure skills that students use in art tasks and whether students who score high on creativity tests are actually artistically talented (Lazarus, 1981).

Standardized art tests, such as those by Graves (1978), Horn (1953) and Meier (1963), have been evaluated by numbers of reviewers, and questions have been raised about their usefulness for identification of artistically talented students. Reviewers have reported, for example, that these tests use many outmoded items, are based upon inadequate samples, are inconsistent or unclear in their scoring, measure learned behaviors rather than native abilities and are not sufficiently complete as measures of art abilities. Clark's Drawing Abilities Test is a new scale which may be useful for identifying students for art programs.

Intelligence and achievement tests and academic records are not suggested as possible criteria or data sources for art programs. Research has shown that artistically talented students often obtain high IQ scores, although students with high IQ scores do not necessarily have high abilities in the arts. In addition, the content of intelligence and achievement tests does not directly relate to the curriculum in visual arts programs. For these reasons, art-related measures must be used to identify artistically talented students.

There are many limitations to objective identification of artistically talented students. Currently there are no agreed-upon criteria that are reliable or valid for generalized use. For this reason a diverse battery of procedures, including both formal and informal measures, is recommended.

Music

Because of the many uncertainties involved in defining and identifying musical ability, it seems best to adopt a multi-dimensional system of selecting students who would profit from specialized instruction in music. Measures might include formal music aptitude and achievement tests, creativity tests, student music grades, auditions, contest ratings, compositions, interviews, rating scales, biographical information and nomination procedures.

Biographical information could include evidence of student motivation and involvement in extracurricular musical activities. The impact of positive environmental influences may be assessed through an inventory of the interests, individual activities and family activities of students. Nominations and rating scales (such as the Musical Characteristics subscale of the Renzulli Scales) may be completed by teachers, parents, peers and the students themselves.

Auditions probably are the most frequently utilized measure in Indiana for selection of students for music programs. In using auditions, it is important that judges agree on the criteria for judging before the auditions begin. This will help to increase objectivity and thereby improve the reliability of ratings. Ratings on individual compositions or other products are another option for measuring the creativity of advanced students.

Standardized music tests are available to measure musical aptitude, achievement,

performance ability and creativity. The most commonly used aptitude tests are Edwin Gordon's Primary and Intermediate Measures of Music Audiation, Musical Aptitude Profile and the Seashore Measures of Musical Talents. Gordon's instruments are more highly recommended by experts in the music education field than the Seashore instrument.

Standardized music achievement tests include the Music Achievement Test and the Simons Measurements of Music Listening Skills. The Indiana Musicality Audition evaluates the ability of students to coordinate listening and performance skills. Creativity is another dimension that is acknowledged as important; however, widely accepted standardized measures that directly relate to musical creativity are not available.

As was indicated for visual art programs, intelligence and academic achievement tests and academic records are not suggested as measures for selecting musically talented students. One reason for this is that musical ability is not necessarily related to academic ability. In addition, it is important that identification procedures match the content of the program to be offered. Intelligence and achievement tests do not accomplish this objective. Thus, the identification procedures should include music-related instruments, rather than instruments related to academic ability.

Dance and Theater

Only a sparce bit of information exists on the identification of students who are talented in drama or dance. As in all visual/performing arts programs, measures of creativity are often used. Another common method of identification is the audition. It may be helpful to have a practicing professional artist provide ratings of student performance. Dance instructors often are especially adept at evaluating dance talent, as they have a basis for comparison of students' talent with that of their age-peers.

A few rating scales or checklists have been published with subscales in the area of dramatics. These include the DeHaan Checklists and the Renzulli Scales. Some others are shown in Platow's (1984) Handbook for Identifying the Gifted/Talented. An example of an unpublished parent rating scale in dramatics is illustrated in Appendix B.

Other forms of informal assessment may provide additional evidence of student need or ability. Interviews and biographical information can be helpful for learning about student participation in private lessons and public performances in play or dances. Parents and private teachers are also good nomination sources. As with all arts programs, it is important that the identification procedures are relevant to the content of the program being offered—i.e., procedures should include dance or drama-related instruments, rather than measures of intellectual/academic ability.

Other Types of Programs

As noted in Chapter 3, Indiana does not recognize creativity and leadership as separate categories of giftedness requiring special programming. Instead, it is suggested that all gifted/talented students be provided with opportunities to develop their leadership and creative skills. Formal instruments for assessing leadership skills do not exist at this time. Some informal measures, such as the Renzulli Scales and the DeHaan Checklists, have been developed to assess leadership ability.

A few school corporations may wish to develop program options in other areas, such as vocational agriculture, business, mechanics, home economics, and so on. The identification of gifted/talented students in these areas has barely been explored nationally. It is recommended that educators wishing to develop a program in one of these areas follow the general principles outlined in this ID Guide. That is, identification should consist of the same steps described in Chapter 1 (nomination, secondary screening, data analysis, etc.). Both formal and informal data should be utilized.

Formal aptitude tests (such as the Differential Aptitude Test) may provide content-relevant assessment of skills. Informal measures also are extremely valuable for identifying students in these unusual program areas. Student products, course grades, nomination procedures, interviews and biographical information are all viable options.

Some efforts have been made to develop rating scales in the vocational talent areas. One such instrument is the Purdue Vocational Talent Scales, which contains scales to assess vocational agriculture, business, home economics and trade and industry talents. (Interested readers may contact John Feldhusen at Purdue University for a copy of this instrument.)

It is essential, when identifying students for unusual program areas to utilize a wide variety of sources. Parents as well as teachers may provide information on current abilities and performances. The community can also furnish useful evidence and product samples from out-of-school programs such as 4-H, scouting, Boys and Girls Clubs, YMCAs, church groups and other youth organizations.❑

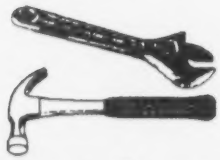
Table 6. Suggested Identification Procedures for Different Types of Programs

	Preschool/Primary Grades	Intermediate Grades	Secondary Grades
Age Levels	Do not use "readiness" tests or other group tests Individualized formal tests are acceptable Use parent reports on child's behavior and ability Use structured teacher observations obtained over a period of time (via rating scales or checklists) Use student products or portfolios	Use a variety of formal and informal measures Include assessment of process skills	Use a variety of formal and informal measures Assess abilities in specific content areas Use product samples and self-nominations
	General	Specific Content Areas	
Intellectual/Academic Programs	Use global measures (e.g., overall intelligence and achievement test scores, grades) Include measures of divergent reasoning, critical thinking and other process skills Use a variety of formal and informal measures	Use content-relevant subtests on formal group tests Include content-specific formal tests, if ceilings are high enough Use SAT scores of Midwest Talent Search students Use content-specific rating scales Student products and other informal measures can be used Obtain information from multiple sources	

Table 6. Continued

	Visual Art	Music	Dance and Theater
Visual/Performing Arts Programs	Use both formal and informal art-related measures Product samples or portfolios provide useful data Do *not* use measures of intelligence or academic achievement by themselves	Use both formal and informal music-related measures Auditions provide useful information Do *not* use measures of intelligence or academic achievement	Use a variety of formal and informal measures Auditions are especially useful Use professional artists to rate student performance Do *not* use measures of intelligence or academic achievement
Other Types of Programs	Follow the general procedures and sound principles outlined in the ID Guide Utilize content-relevant aptitude tests, if they are available Use a variety of informal measures Obtain information from many sources		

Chapter 5



Selection of Procedures

The next step in determining the identification process is to select the procedures to be used. These include procedures for nomination and secondary screening of students, data analysis, placement decisions and notifications, appeals and reviews and exit policies.

■ NOMINATION AND ▼SECONDARY SCREENING

As indicated in Chapter 1, determination of the eligible students is actually a two-fold process. The first step involves creating a "pool" of students from which to select. In the second step, more information is collected and utilized to assess the educational needs of each student in the pool. The procedures involved are the *selection of instruments* and the *criteria to be used for each step*. The recommendations detailed below are summarized in Table 7 on page 54.

Selection of Instruments to be Used in Each Step

The decision about which instruments to use for nomination and which to use for secondary screening often is made at the same time as the actual selection of the instruments. This is so because some instruments lend themselves more easily to one step than the other. Most *categories* of instruments (e.g., formal tests, rating scales, student products, etc.) can be used for either or both steps, but *particular instruments* (e.g., ISTEP or WISC-R) may be more appropriate for one step than the other.

In general, formal instruments may be used for both nomination and secondary screening. Determination of which formal test(s) to use at each step depends on a number of factors, including test availability, cost, ease of administration and usage, ceiling, reliability and validity. For example, individual intelligence tests require special training for administration and interpretation, are expensive to purchase and can be given only to one student at a time. However, they have high reliability and validity, and often have high ceilings. These factors combined indicate that individual intelligence tests are impractical to administer to an entire student body, but may be useful for making fine discriminations between students. For these reasons, individual intelligence tests lend themselves to the secondary screening part of the process. Group intelligence, achievement and aptitude tests may be useful for either (or both) steps in the process. Caution should be utilized in considering some of these tests (such as ISTEP) for secondary screening; they often have low ceilings and

thus may be inadequate for making fine discriminations at the upper extremes. (ISTEP was designed to measure *minimum* proficiencies, and thus has few items which assess higher-level abilities.)

Published informal instruments often are useful for both nomination and screening purposes. Likewise, unpublished informal instruments can be used in either or both steps. As indicated in the previous chapter, off-level classroom tests should be used with caution, for nomination purposes only. Nominations, by their very nature, do not provide fine discriminations between students, and thus are most helpful for selecting students for the "pool." Student products, auditions and portfolios can provide helpful information for both stages, although auditions and portfolios are used most often at the secondary screening stage.

It is important that both the nomination and secondary screening procedures contain a variety of instruments. The purpose of nomination is to be "inclusive" rather than "exclusive." The pool should contain all students whose abilities indicate educational needs that possibly require services not offered in the regular curriculum. Although it is tempting to utilize group achievement and intelligence tests as the only instruments in the nomination process, many students will be missed who could benefit from the services. Experience has shown that such a procedure identifies only the high test scorers. Students who do not test well, are underachievers or utilize divergent thinking skills tend to be overlooked, although they may have some of the greatest need for the services being offered.

Another combination of nomination procedures to be used with caution is group test scores with teacher nominations, without any other supporting information. Teachers who have not received inservicing on the characteristics of gifted/talented children tend to nominate students who are well-behaved and receive good grades. This results in a pool of students who are good test-takers and who are the "teacher-pleasers." Many students who could benefit from programming do not fit into this category. Teachers often can provide more useful information after being inserviced on the characteristics of gifted children and the use of nomination and rating scales.

Criteria

After selecting the instruments to be used for nomination and secondary screening, a decision needs to be made concerning the levels or scores on each measure which qualify a student for the gifted/talented program. Nomination criteria are less stringent than are secondary screening criteria. In Indiana, it is recommended that approximately 10-14 percent of the student population (by grade level) be nominated, and five to seven percent be selected by secondary screening.

Selection of the criterion level is relatively easy with formal instruments that are given to all students in a particular age or grade level. In this case, the decision-making committee simply needs to look at the scores of all students in that grade level, and determine the score which represents the top 10-14 percent of students in that grade in the corporation (or five to seven percent for secondary screening).

It is important to note that the criterion is determined relative to the scores obtained

in the school corporation itself, rather than at the state or national level. For example, suppose that, on the Otis-Lennon School Ability Test, a corporation arbitrarily chooses the nomination criterion at the 85th national percentile level, and at the 95th national percentile for secondary screening. If they have not examined these scores relative to the local population, they may find that they are selecting either too few or too many students. If too many students are chosen, the criteria are too low for local needs; if the criteria are too high, then not enough students will be selected. In these cases the criteria need to be adjusted. The goal is to identify the top five to seven percent whose needs are not being met by the regular curriculum.

The point is that the district should be surveyed to find out the appropriate levels to be used for nomination and secondary screening. This also applies to informal measures. In cases where the instruments are not given to all students in a corporation, the establishment of a criterion level may be rather arbitrary at first. In some cases, it may take several adjustments to find the best combination for local needs.

Table 7. Considerations for Determination of Nomination and Secondary Screening Procedures

Selection of Instruments to be Used in Each Step

- Consider both the category of the instrument (e.g., formal test, rating scale, student product, etc.) and properties of the particular instrument
- Formal instruments can be used for both nomination and secondary screening; some particular tests should be used for nominations only
- Informal instruments can be used for both steps
- Include a variety of formal and informal instruments in both steps
- Avoid the use of formal group tests as the sole instruments for nomination

Criteria

- Nomination criteria are less stringent than are secondary screening criteria
- Determine criteria relative to scores obtained within the school corporation itself rather than using state or national norms

DATA ANALYSIS

So far the procedures discussed have concerned selection of instruments and criteria for nomination and secondary screening. Equally important, however, is the manner in which those data are put together to make selection and placement decisions. Indiana regulations (511 IAC 6-9-8) specify that:

A selection committee shall:

(A) develop an identification matrix using a composite index to identify the top five (5) to seven (7) percent of the student population according to program goals; and

(B) select appropriate educational services for each identified student based on student characteristics and needs.

Although the 511 Rule uses the term *"matrix,"* several viable methods are available for the purpose of combining data into a composite index. These methods include variations on the *cutoff threshold, matrices, T-Scores* and *student profiles*. Discussions on each procedure follow with advantages and disadvantages of each method summarized in Table 8 on page 63.

Cutoff Threshold

Faced with a large talent pool, it sometimes is tempting to establish a policy utilizing strict cutoff scores. In the cutoff procedure, a criterion level is set for scores on formal tests, and all students with scores below that criterion are not accepted into the program. The misuse of arbitrary IQ and achievement score cutoffs to screen for gifted students has already been discussed. By ignoring all data except formal test scores, the corporation most likely will be providing services primarily to high-achieving, middle-class, white children. Those likely to be excluded from the program are the creative and productive thinkers and underrepresented gifted students with high potential. On the other hand, in some cases (i.e., talent search programs) use of a cutoff may, in fact, be the most appropriate option.

Matrices

Many school districts use a matrix for data collection and decision making. Sample 3 on page 57 depicts the Baldwin Identification Matrix—one of the most widely used matrices. (A variation is shown in Sample 4 on page 58.) As seen in the matrices, all test scores collected for each child are plotted on a column of the matrix. Each vertical column has been given a weight from 1 to 5. The columns are added and multiplied by the corresponding weight and re-added for a total score. The total weighted scores of all students then are ranked and cutoffs for inclusion in the program are made.

One of the advantages of matrices is that they are simple and easy to use and understand. Another advantage is that informal measures may be given as much weight as formal measures. This is helpful for the purpose of identifying students from underserved populations. However, in practice, formal measures often receive heavier weights than informal measures because of the belief that formal measures somehow are more "objective" or important and revealing than informal measures. In fact, sometimes school districts choose to multiply the converted formal test scores by 2 or 3, so that they will count heavily into the total score (see Sample 4 on page 58).

Another problem comes from the fact that different scores are combined to obtain a single measure of "giftedness." The single index may represent a diversity of abilities across different students who are being chosen for one type of program. For example, a particular composite score may represent high achievement levels, leadership skills, motivation levels or creativity. The particular composite score would not differentiate between students, each of whom might have different strengths and require different types of services. Finally, as Feldhusen, Baska and Womble (1981) pointed out, reducing the scaling of a measure to 5- or 10-point intervals results in lowered reliability and hence lowered ability to discriminate between students.

T-Scores

Another method of combining data for selection purposes is the use of T-Scores. In this procedure, student scores are converted into standardized T-Scores. Scores of similar instruments then are weighted as appropriate and combined into a composite score. The use of T-Scores has many of the same advantages as the use of matrices. In addition, T-Scores allow educators to "compare apples and oranges": tests with differing means and standard deviations are converted into a format in which all tests have the same mean and standard deviation. (See the glossary for a definition of "mean" and "standard deviation.") For a variety of other technical psychometric reasons, many experts in the field of gifted education advocate the use of T-Scores.

The major disadvantage of T-Scores is that they are difficult for some people to use and understand. If a computer is not available, and instruments are used for a large number of students, computation of T-Scores can be cumbersome. Computer software packages for computing T-Scores are available from Redbud. PC-Calc also can do T-Scores. Any software package able to do a spreadsheet may be able to compute T-Scores. An example of a T-Score spreadsheet for AppleWorks programs is shown in Sample 5 on page 59.

Sample 3. Baldwin Identification Matrix

Student_____School_____

Age_____ Grade_____ Sex_____ Date_____

ASSESSMENT ITEMS	SCORES					
	5	4	3	2	1	Below or not available
Tally of Checks						
Weight	x5	x4	x3	x2	x1	
Weighted Tally						
TOTAL SCORE						

Sample 4. Variation of Baldwin Identification Matrix

Student_____ School_____

Age_____ Grade_____ Sex_____ Date_____

ASSESSMENT ITEMS	SCORES					
	5	4	3	2	1	Below or not available
IQ Test x weight = total pts	140+ x2 = 10	130-139 x2 = 8	120-129 x2 = 6	110-119 x2 = 4	100-109 x2 = 2	
Achievement Test —Total Battery	Stan.9	Stan.8	Stan.7	Stan.6	Stan.5	
—Total Reading	Stan.9	Stan.8	Stan.7	Stan.6	Stan.5	
—Total Math	Stan.9	Stan.8	Stan.7	Stan.6	Stan.5	
Renzulli Scales —Learning	30+	29-26	25-22	21-18	17-14	
—Motivation	34+	33-30	29-26	25-22	21-18	
—Creativity	34+	33-32	31-28	27-24	23-20	
Parent Nomination	Super-ior	Very Good	Good	Average	Below Average	
Other:						
Tally of Checks						
Weight	x5	x4	x3	x2	x1	
Weighted Tally						
TOTAL SCORE						

Sample 5. T-Score Spreadsheet (for AppleWorks programs)

Directions:
The computer will already have the column names (A,B,C...) and line numbers (1,2,3...) set up. You type in the information and calculations that you want the computer to do. First, type in the student names (or codes) in Column A and test scores in Column B. Type the rest of the columns exactly as shown here (e.g., type "(B3-C1)"). When you are done the computer will do the calculations. The numbers in Column F will be the T-Scores! Once you have set up the spreadsheet, you can type in different student names and test scores, and the computer will automatically recalculate the T-Scores.

	Column					
Line	A	B	C	D	E	F
1	Student	Score	(B12)		(D13)	T-Score
2						
3			(B3-C1)	(C3xC3)	(C3/E1)	(E3x10+50)
4			(B4-C1)	(C4xC4)	(C4/E1)	(E4x10+50)
5			(B5-C1)	(C5xC5)	(C5/E1)	(E5x10+50)
6			(B6-C1)	(C6xC6)	(C6/E1)	(E6x10+50)
7			(B7-C1)	(C7xC7)	(C7/E1)	(E7x10+50)
8			(B8-C1)	(C8xC8)	(C8/E1)	(E8x10+50)
9			(B9-C1)	(C9xC9)	(C9/E1)	(E9x10+50)
10			(B10-C1)	(C10xC10)	(C10/E1)	(E10x10+50)
11						
12		@AVG(B3...B10)		@AVG(D3...D10)		
13				@SQRT(D12)		

Student Profiles

Another common method of analyzing data is the use of individual profiles. Several variations of this method are available. In the first variation, shown in Sample 6 below, a chart is made for each grade level, showing student names and unweighted test scores. The selection committee looks at the chart and simply "eyeballs" the students with the top scores.

The major advantage of this "common sense" approach is its simplicity and ease of use and understanding. There are many disadvantages, however. First, the process does not allow unquantifiable measures, such as extracurricular activities, to be used in the decision-making process. Second, although informal measures, such as teacher ratings, may be part of the chart, in practice formal measures often receive the heaviest emphasis in final decision-making. Thus, the program may tend to be full of good test-takers and devoid of other students who might have great need for the services. Finally, this format provides no overall assessment of student need for the program. Thus, the selection committee has no way to justify its decisions should someone question the results.

Sample 6. Student Profile, Type I ("Eyeball" Method)

Student	IQ	Math Ach	LA Ach	Avg Tchr Rating	GPA/ Avg Grd	Decision
1	135	92	85	4	B+	
2	114	90	74	4	A	
3	126	95	98	2	C	

In the second variation (the Criterion Method), each student's scores are entered onto a chart similar to the one shown in Sample 4 (Variation on Baldwin Matrix) on page 58. Test scores are given a weight from 1 to 5—that is, all test scores are converted into scores from 1 to 5. However, in this method scores are not combined down the columns or summed to find a composite score. Instead, a criterion level is established regarding the converted scores. For example, the criterion may be that all converted scores must be at least a "3" or higher for a student to be admitted to the program. Or perhaps students must score at least a "4" or better on three of five measures. Another example might require students to obtain at least a "3" on IQ and achievement tests, and a "4" on three of five other measures.

The third variation is like the second, but is presented in a visual format. In this case, scores are converted into percentile ranks or, preferably, standard scores (e.g., T-Scores) and then plotted on a graph. As with the previous type of student profile, a criterion level is established for consideration purposes. Scores are not summed to provide a composite index. An example of this type of student profile, the Southern-Spicker Profile, is in Sample 7 on page 62.

The second and third types of student profile have several advantages. First, the profiles allow educators to have a general idea of each student's strengths and weaknesses relative to himself/herself, which may aid in determining the needs of that student. Second, many different types of data may be entered in addition to formal test scores. These data are not weighted so that students who have low test scores may receive equal consideration with high test-scorers. As with the first type of student profile, however, in practice formal test scores often tend to receive heavy emphasis in final decisions. Additionally, the student profiles do not provide a composite index of student ability. The selection committee thus may have difficulty in justifying their decisions as being "objective."

As is evident, none of the procedures for data analysis are perfect. All of the options have strengths, and all have weaknesses. There are no right and wrong answers to the question of which option should be chosen. In Indiana, school corporations that provide gifted programming are required (511 IAC 6-9-8) to have some way to put information together to make decisions, but the choice of how they put that information together for decision-making is made by individual corporations based on local needs and philosophy. The advantages and disadvantages of the different options are summarized in Table 8 on page 63.

Sample 7. Student Profile, Type III (Pictorial Criterion Method)

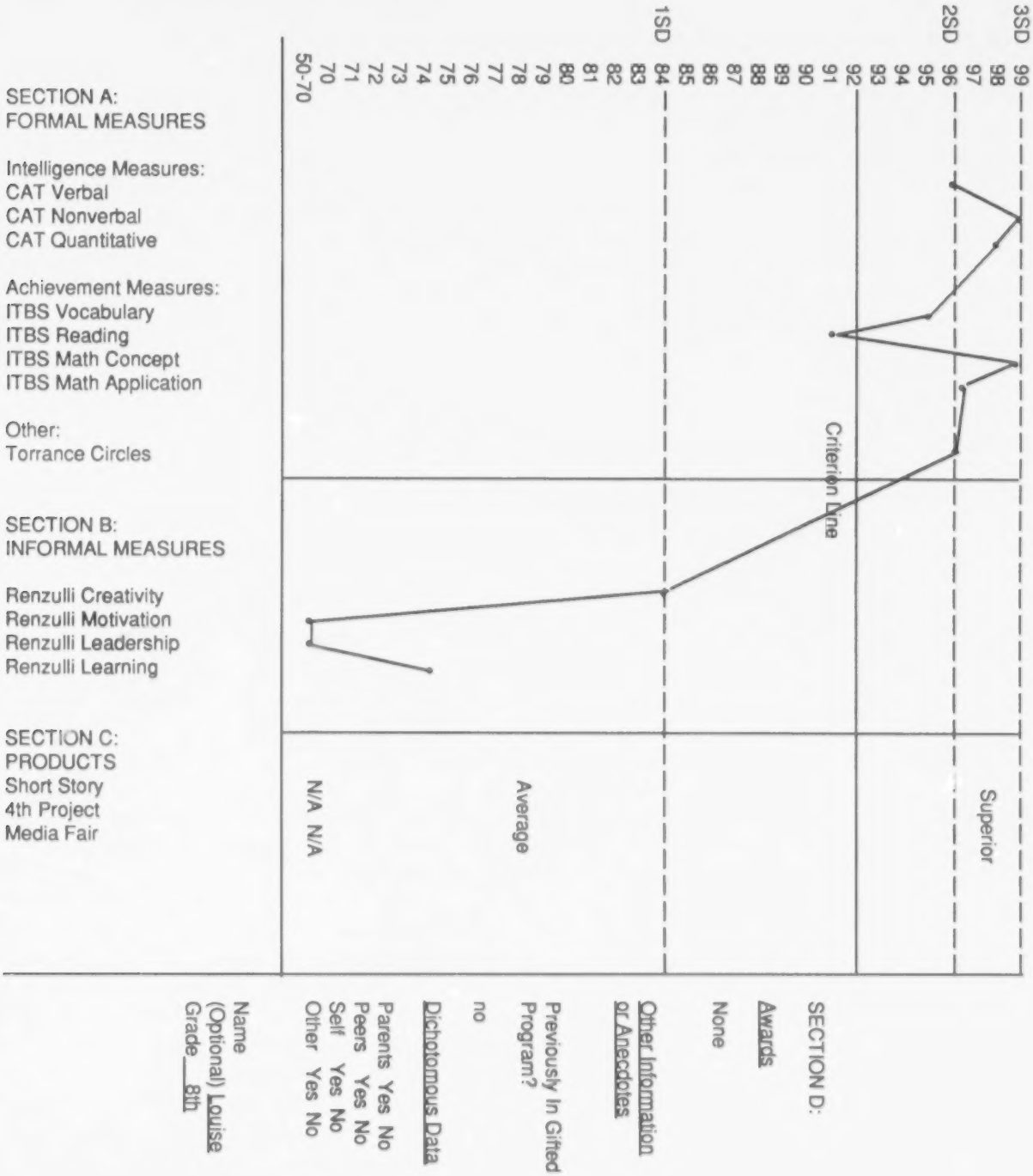


Table 8. Advantages and Disadvantages of Data Analysis

	Advantages	Disadvantages
Cutoff Threshold	Quick, easy and "clean" (no "borderline" or provisionally accepted students) Useful in talent search programs (e.g., Midwest Talent Search)	Criterion level is usually arbitrary Decisions are based on program needs, rather than needs of individual students Exclude students from under-served populations Exclude information from informal measures
Matrices	Easy to use and understand Informal measures can be given as much weight as formal measures	Formal measures given heaviest weighting in practice Composite index represents different abilities across different students Lowers ability of each measure to discriminate between students
T-Scores	Allow educators to compare "apples and oranges" Advocated by many experts in gifted education, for a variety of technical psychometric reasons	Calculations sometimes are cumbersome without use of a computer Composite index represents different abilities across different students
Student Profiles	Type I ("Eyeball" Method) Easy to use and understand "Common sense" approach	Formal measures given heaviest weighting in practice Decisions totally subjective, no overall assessment of student need/ability
	Types II (Criterion Method) and III (Pictorial Criterion Method) Easy to use and understand Allow determination of student strengths and weaknesses Many types of data can be used	Formal measures given heaviest weighting in practice Decisions semi-subjective, no overall assessment of student need/ability

➨ PLACEMENT DECISIONS AND NOTIFICATIONS

After selecting the method of data analysis, procedures for making placements and notifications should be delineated. For example, does the entire selection committee vote on which students to accept from the entire group, or does each committee member look at a certain number of applicant profiles and choose one or two for the program? Does each committee member have equal weight in the decisions, or does one member act as the "head judge" in case of a tie?

Another consideration to be made is the extent to which, beyond the data analysis, professional judgment will enter into the decisions to be made. This is determined partly by the method of data analysis. With the first method of student profiles ("Eyeball Method"), professional judgment becomes a strong component of the eventual decisions because students are not compared on a standard composite score. At the opposite extreme, the use of a strict cut-off threshold on one measure offers little room for professional judgment or discussion. Somewhere in the middle are the use of matrices and T-Scores. In addition to the method of data analysis, other considerations may enter into the picture, such as the expertise of the selection committee members, the political climate of the school and community and the desire to include underserved populations in the program. Although it is possible to make selections based solely on "objective" data and composite scores, many educators have found it prudent to allow professional judgment to override the objective data if necessary.

Finally, decisions should be made regarding notification of the selection status for each student. Notification may occur through letters, individual or group conferences, telephone conversations or a combination of these. Although it may be easiest simply to send a letter, many schools have found that conferences are a helpful addition. Parents seem to appreciate the opportunity to discuss their own situation, to learn more about the services being offered and to meet other parents with children like theirs. Some schools have found that parents and others are sensitive to the term "gifted," so it may be helpful to use a term such as "high ability" instead. Examples of notification letters are shown in Samples 8 and 9 on pages 65 and 66 respectively.

Sample 8. Notification Letter 1

Dear Parent:

The academically talented classes at the middle school are one option for academic placement next year for your child. The purpose of these classes are to provide additional enrichment and a more challenging curriculum for students who have demonstrated a high level of performance in a subject area.

The first step in identifying students for these classes was to form a large nomination pool based on available test score data and teacher recommendation. Your child has been included in the nomination pool as a result of meeting at least one of the minimum requirements.

If a student is interested in participating in an academically talented class, he/she must complete the attached application form, and submit it to his/her teacher or the middle school guidance office by _____. When your child submits his/her application, he/she will be considered for final selection. Final selection is determined by a selection committee, whose members carefully evaluate all the available data on your child.

You will be notified as to whether or not your child has been selected for participation in the academically talented classes next year.

If you have any further questions about the application form, the program or the identification process, please feel free to call the middle school guidance office at _____.

Yours truly,

Principal

Gifted Education Coordinator

Sample 9. Notification Letter 2

Dear Parent/Guardian:

The placement review committee for the Academically Talented Program has completed the screening for new enrollees. After this careful review, the members recommended that your child, _____, should continue his/her current placement. We believe this placement will provide the best educational program for your child. Your child can be reconsidered for placement next year.

If you should have questions about this decision, you may phone my office at _____.

Sincerely,

Coordinator for Gifted/Talented
Education Programs

✔ APPEALS AND REVIEWS

Indiana rules (511 IAC 6-9-8) specify that a review committee hear student identification, placement and removal appeals. In planning the identification process, the procedures for handling appeals and reviews need to be outlined. This includes deciding who is eligible to appeal the rejection of a student (e.g., parents, teachers, principals and/or students). Another consideration is whether the review committee will have final authority in making decisions, or whether they will make a recommendation to another person (such as the coordinator or a principal) for the final decision. A third consideration is whether the committee will review the same data as had been gathered originally on a particular student, or whether new information may be added. Examples of appeal/review request forms are shown in Samples 10 and 11 on pages 69 and 70 respectively.

Consideration also should be given to procedures for students who move into the corporation in the middle of the year or semester. The policy might address the question of whether or not such a student may enter the program immediately upon selection, or be required to enter at the end of a given unit, grading period, semester or year. Thought should be given to the question of whether a student accepted into a program in another school corporation should automatically be included in the current program, or whether a probation period might be appropriate. A final consideration is whether a student's records should be reviewed with the already-existing data when they enroll, whether more information should be gathered immediately or whether to wait to collect more information at the same time as with all students (i.e., at the beginning or end of the school year).

☆ EXITS AND REMOVALS

The final procedure to be delineated is the exit/removal policy for students whose educational (or other) needs do not match the program. The policy might indicate the persons who are eligible to request the exit or removal of a student from the program. Most school corporations have a hierarchy of procedures to be used in removal cases. For example, depending on the problem, the teacher may counsel the student, then have a conference with a parent. If the problem is not resolved, the principal may become involved. Sometimes school counselors or others also may intervene. If the problem still has not been eliminated, the gifted coordinator or review committee may become involved. In rare cases the superintendent may be asked to mediate. Many programs put a student on "probation" before resorting to removal, in order to give the parties time to try to resolve the problem. Students who withdraw from a school corporation in order to move usually do not present much of a problem. Coordinators can facilitate the move by creating a file of identification data for each student, which could be added to the student's permanent records or be made available to personnel from other schools who might request such information.❑

Sample 10. Appeal/Review Request Form 1

Student Name: _____ Grade: _____

School: _____ Teacher: _____

Parent Name: _____

The following items are possible reasons for requesting an additional review of this student's application file for the Academically Talented Program. Read these carefully and indicate which reason you believe applies in this situation. After making this decision, describe why this choice is applicable. INCLUDE A COPY OF ANY ADDITIONAL INFORMATION.

1. We have additional test information.
Comments: _____
_____

2. This student has recently received special recognition.
Comments: _____
_____

3. The previous test results were invalid.
Comments: _____
_____

4. Personal problems at home interfered with this student's school work this past year.
Comments: _____
_____

Person making this appeal: _____

Relationship to the student: _____

Telephone: _____ Best times to reach: _____

Address: _____
_____

_____

Sample 11. Appeal/Review Request Form 2

Student Name: _____ Grade: _____

School: _____ Teacher: _____

Parent Name: _____

In your own words, explain why you believe this student's original application and your additional information should be reconsidered.

_____

_____

_____

The following is additional information about this student:

_____

_____

_____

Person making this appeal: _____

Relationship to the student: _____

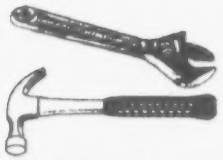
Telephone: _____ Best times to reach: _____

Address: _____

_____

_____

Chapter 6



Special Considerations: Underserved Populations

The difficulty in identifying giftedness within special populations is well documented (Gallagher, 1985; Whitmore & Maker, 1985). The reason most often stated is that the formal tests, particularly intelligence tests, used to identify gifted students are inappropriate for use with ethnic minority and economically disadvantaged subpopulations of American society. The appropriateness of such tests has been challenged for the following reasons (Sattler, 1982):

- Standard intelligence tests have a strong white, Anglo-Saxon, middle-class bias.
- National norms are inappropriate for use with certain ethnic-minority-group children.
- Ethnic-minority children are handicapped when taking tests because of:
  - deficiencies in reading skills and lack of practice in taking tests,
  - failure to appreciate the achievement aspects of the test situation,
  - limited exposure to the cultural background on which the test is based, and
  - differences in concepts of time.
- Rapport and communication problems may exist between white examiners and ethnic-minority children.
- Test results induce negative expectancies in teachers.

Some general guidelines for identifying giftedness among special populations are summarized in Table 9 on page 72. The sections that follow discuss the characteristics and modifications needed to identify students from specific underserved populations. These include those who are economically disadvantaged, black, Hispanic, Amish, female, rural, disabled, underachieving, highly gifted or any combination of these. Possible identification procedures for students from each group are summarized in Table 10 on page 94.

It is suggested that corporations concentrate on better identification of those groups of students who are underserved by the gifted/talented program, relative to the proportion of that group in the total school population. For instance, if blacks or rural students form a major proportion of the total school population, but form a much smaller proportion of the students in the gifted/talented program, some attempts should be made to improve the identification procedures for them.

Table 9. General Guidelines for Identifying Giftedness among Underserved Populations

Select formal instruments that are the least culturally biased, have been standardized on the population of interest or in some way are adaptable for the students being assessed (e.g., nonverbal tests).

Do not use formal test results to exclude special students, although they may be used to include these students in the nomination pool and program.

Utilize a variety of informal measures with a variety of sources.

Allow information from informal measures to carry at least as much weight in decision-making as formal test scores.

Provide all students from special populations with experiences likely to foster the development of verbal and high-level thinking skills, then identify students who have excelled in these activities.

Base decisions on comparisons between students within the population of interest (i.e., do not compare these students with those of the majority population), but also be conscious that they will have to succeed in a program designed primarily for the majority population or provide alternative program options for these students.

Do not utilize a quota system or lower the nomination and secondary screening criteria. Instead, strive for (but do not force) identification of a representative proportion of the underserved population (i.e., the same percentage of nominated and selected students as in the entire school system).

Provide intensive inservice to teachers and others involved in the identification process to familiarize them with the characteristics and needs of the special population.

Provide all students in underserved populations the opportunity to appeal placement decisions, via the school corporation's appeal and review procedures.

ECONOMICALLY DISADVANTAGED STUDENTS

The literature concerning "disadvantaged" gifted children suffers from a fundamental confusion in connecting economic disadvantage with culturally different categories of gifted students. This confusion often results in a tendency to identify economic disadvantage with certain ethnic or racial groups. The distinction between economic and cultural disadvantage is an important one. While many Indiana districts have few racial or ethnic minority students, poverty is a condition which can be identified in most schools. In those districts enrolling substantial numbers of children from racial and ethnic minorities, efforts to increase racial representation may ignore the additional necessity of seeking out those who come from economically disadvantaged populations. On cultural lines the program participants may appear to be representative of the district, but in fact the gifted program may remain an upper middle-class preserve.

Not all low-income children demonstrate the characteristics described below. In fact, many homes that could be classified as disadvantaged on purely economic terms provide excellent learning environments. What can be asserted confidently, however, is that poverty makes the creation of such an environment much more difficult, and that a special effort should be made to examine students from disadvantaged backgrounds in order to identify the gifted students hidden in this population.

For the economically disadvantaged child, poverty forms three obstacles to achieving recognition in gifted programs. First, poverty limits opportunity. For families desperately worried about achieving minimal subsistence, it is difficult to devote energy or resources to providing the enriching experiences that are a matter of course in middle-class homes. As a consequence, exposure to these experiences tends to be limited for economically disadvantaged children.

Second, poverty limits the self-expectations of students. For many families the condition of poverty has persisted for several generations. Children from such environments are unlikely to embrace goals and aspirations that are far removed from their everyday experiences. In addition, disadvantaged students often decline to enter gifted programs, even when selected.

Third, poverty also limits the expectations and estimations of others. Teachers and parents often do not believe that gifted students exist among the poor (Clark, 1983). Teachers may make hasty and summary judgments about ability based on the way students dress, speak or are groomed. Parents, too, may not believe that their sons or daughters could qualify for gifted programs. In consequence, this group of parents may complete fewer parent nominations and checklists than other parents.

Because of limited educational opportunities, economically disadvantaged students may fail to master the linguistic and grammatical structure of the mainstream culture (Renzulli, 1973). Thus, children from economically deprived backgrounds are less likely than middle- or upper-class children to score highly on standardized

instruments. For this reason it is important to modify the regular procedures while screening this population. Three different systematic approaches have been suggested to accomplish this:

- A number of researchers have advocated the use of tests that are less verbal in their demand and less reliant on the cultural assumptions of many standardized instruments. These "culture-fair" or "culture-free" tests yield results that show less discrepancy in performance based on socioeconomic status. Some of the most notable examples include the Ravens Progressive Matrices, Cattell Culture-Fair Intelligence Series and Cartoon Conservation Scales. The difficulty with employing such measures is that they have a lower relationship to school performance than more traditional instruments.
- Another option lies in lowering the requirement for admission in certain geographical areas of the district. A few corporations in Indiana utilize this option, although many have found community resistance. A similar option is to award bonus "points" for an economically disadvantaged candidate. This practice derives from the SOMPA model (Mercer and Lewis, 1978). Some educators have objected to the use of this model because the extent of disadvantage is difficult to assess, and the bonus or weighting in essence is arbitrary.
- Another possibility, advocated in the National Report on Identification (Richert, et al, 1982), involves the use of local norms and percentiles when interpreting standardized data. The procedure works well in many districts; however, in districts where substantial differences in economic status exist, this procedure by itself may be inadequate to seek and find disadvantaged gifted students.

Children from this population do show positive behavioral characteristics that can be observed by parents and teachers. These traits can form the foundation for a behavioral rating scale or checklist. Some traits of disadvantaged gifted learners that help with their identification (Baldwin, 1973; Torrance, 1964), when formal testing often fails, are:

- high mathematical abilities,
- alertness, curiosity,
- independence of action,
- initiative, eagerness to do new things,
- fluency in nonverbal communication,
- imagination in thinking,
- flexibility in approach to problems,
- learning quickly through experience, and
- retaining and using ideas and information well.

In addition to teacher rating scales or checklists, creativity measures and product samples have been used successfully to identify students from this population. In selecting such procedures, it is essential that efforts be made to elicit nonverbal and verbal talents and to collect samples from a wide variety of sources. Samples of creative verbal production can be collected on audiotape or videotape to remove the negative effects of incorrect spelling and grammar on product ratings.

Parent awareness and community involvement can greatly increase the likelihood of finding gifted disadvantaged students. Every effort should be made to contact parents to solicit information on current interests, abilities and performances. The community can furnish useful information and product samples from out-of-school programs such as scouting, 4-H, YMCAs, Boys and Girls Clubs and other youth organizations.

RURAL STUDENTS

Rural education is shaped by the sparsely settled nature of the countryside and the values and beliefs of its inhabitants. It is characterized by primacy of local control, smallness of schools, inadequacy of finances and the relatively poor economic status of many residents in the district, combined with their faith in free public education (Carmichael, 1982). The gap between rural and urban experiences, however, has been decreasing because of improved transportation, the availability of instant communication systems such as radio and television, and the consolidation of rural schools.

Despite the increased urbanization of many rural children, there remains many students whose high potential is masked by behaviors that are not typically found among gifted children. According to Spicker, Southern and Davis (1987), rural children:

- speak in a regional dialect that varies considerably from standard English,
- are less verbal in oral communication skills than most gifted students,
- have had limited experiences outside their own community, and
- are relatively unaffected by the pressures of time.

These children may constitute 20 percent or more of the enrollments of a rural consolidated school corporation, and are most likely to come from the small feeder townships predominantly populated by longtime residents with traditional rural values.

To find the children who may be gifted among the rural population requires special identification techniques. For example, when using an achievement test battery, educators should attend more to subtests that discriminate among gifted students, such as vocabulary, reading comprehension and math concepts. They should attend less to subtests that do not discriminate well, such as spelling, punctuation, language usage and work study skills. These subtests tend to be the academic areas in which disadvantaged rural children do most poorly. Other options include utilization of an untimed, nonverbal test of intelligence and/or measures of spatial relations and mechanical aptitudes.

In addition, informal measures may be particularly helpful in selecting students from rural populations. Parents can supply a wealth of information about children's interests and talents in such things as auto and tractor repair, special hobbies and collections, performing arts abilities, 4-H projects and other out-of-school activities. Peer and teacher rating scales, self-nominations, student products, portfolios, interviews, etc. can all provide additional information for a comprehensive assessment of each student's needs and abilities. Product samples should be evaluated on the basis of content rather than grammatical form. Finally, inservice training sessions may be utilized to sensitize teachers to possible biases they may have against students who speak nonstandard English (i.e., "Hoosier dialect").

One of the advantages of small, rural schools is the close relationship between members of the community.

Counselors frequently know a good deal about the family situations of most children in the school. Such a person can be a great asset on the selection and review committees, because they can provide background information about students which may not be available otherwise. Committee members can then take this information into account when making placement decisions.

BLACK STUDENTS

The effects of race on identification of black students can be divided into several different factors. First, racial differences can create effects that screen students from initial nomination pools. Many educators hold racial stereotypes that do not recognize the likelihood of high ability appearing in this group. Hence, expectations of performance are lowered and the teacher simply overlooks evidence that the child is quite capable. Moreover, the diminished expectation may lead to diminished performance by the student.

These effects can be compounded by a misinterpretation of the behaviors of black students in the classroom. For many black students, the kinds of behaviors reinforced in the home, at church or in interactions with peers are looked on with disfavor in school settings. Verbal creativity and humor, active participation and spontaneous interaction may be interpreted as disruptive and disrespectful by many classroom teachers. In addition, the behaviors may compound some teachers' anxieties that black students will be overly troublesome or unruly.

Black children have different characteristics than white children. Gay (1978) has suggested that gifted black students:

- may feel alienated by school at an early age,
- seek structure and organization in required tasks,
- may be difficult to motivate in some abstract activities,
- may have a large vocabulary inappropriate for the school setting,
- may have been conditioned to suppress questions,
- make up games and activities,
- may demonstrate strong concentration due to persistent noise in the home environment,
- may express displeasure at having to stop an activity,
- have a pronounced need for low amounts of supervision,
- may neglect school work due to other responsibilities and interests, and
- may not meet expected achievement levels.

Blacks may have different cognitive strengths and weaknesses than whites. Some evidence exists that blacks are best able to solve problems with visual and auditory content, have strong memories and are adept at convergent production. Weaknesses include vocabulary and divergent verbal production (Bruch, 1971). Because of the verbal nature of standardized and classroom tests, it is not surprising that blacks score less well on group IQ and achievement tests than whites as a group. In fact, the main obstacle to the identification of gifted black children is the traditionally heavy reliance upon formal group instruments seen in many gifted/talented programs.

In order to counteract the negative effects of race on formal test scores, researchers have renormed some tests for specific populations. The Stanford-Binet Intelligence Scale and the Structure of Intellect Tests are among this group (Bruch, 1971; Meeker, 1978). Although it does not use separate norms for blacks, the SOMPA procedure (Mercer & Lewis, 1978) awards a number of

"bonus points" to WISC-R scores as a way to balance the effects of race on test scores. Some educators, however, have questioned whether the number of bonus points awarded is arbitrary. Many experts in gifted education (e.g., Richert, 1982, 1987) also recommend the use of local norms, in addition to national norms, for standardized instruments. This procedure is suggested when the local population contains a high proportion of minority students.

Another approach is the utilization of nonverbal tests or other instruments that are relatively "culture free" or "culture fair." The Performance scale of the WISC-R is one instrument used to measure nonverbal intelligence. The Cattell Culture Fair Intelligence Series, Ravens Progressive Matrices and Advanced Progressive Matrices, Cartoon Conservation Scales and Stallings Environmentally Based Screen are other measures that are assumed to be relatively culture fair. The disadvantage of this group of tests is that they may not predict school success as well as do traditional intelligence and achievement tests. Finally, creativity measures, such as the figural tests of the Torrance Tests of Creative Thinking, have been used successfully to assess the nonverbal, creative abilities of black students.

Almost all experts in the identification of gifted and talented children agree that informal measures should be included in the battery of instruments used to identify gifted minority students. Some of the most popular methods are the use of nominations, rating scales and checklists. Teacher input is particularly valuable if the teachers have been inserviced on the needs and characteristics of black students. Peer nominations may be helpful in the identification of leadership skills and creativity. Parents also can provide information on the abilities of their children, who may deliberately mask their performance in school in order to be accepted by their peer group.

Other informal measures can provide additional information not available from formal test scores. In identifying minority gifted students, it is important to utilize as many sources as possible. The community arenas of church, YMCA, scouting, etc., may be places where black students excel, and should not be overlooked as sources of information.

In addition to the measures that are used, some special procedures can help to identify gifted minority students. One of these is the forced-choice procedure (Ryan, 1983). In this method, teachers are instructed to consider all children, regardless of race or ethnic group, and to form a preliminary list of nominations. If the list does not include a black child, the teacher is directed to review the roster of black students and to select the most academically advanced. This procedure insures that at least one black student will be included in the nomination pool.

Another option is the use of a quota system. In this procedure, a given number of program slots are allocated to the minority group. In order to fill the allocated slots, the criterion scores generally are lowered. Although this procedure does result in minority representation in the program, its use is not recommended. Some students selected through this procedure may have difficulty succeeding in a gifted/talented program, which generally is designed for the majority population, unless teacher expectation and the level of classroom activities are lowered. In addition, it may be difficult to justify to

angry parents why some students who were included in the program have lower scores than others who were not included. The Bakke reverse discrimination case, heard by the Supreme Court in 1978, illustrates some of the difficulties that may follow such a policy (Mitchell, 1982). It is suggested that, rather than using a quota system, educators should strive for (but should not force) identification and placement of a representative proportion of the minority population in the gifted/talented program (i.e., the same percentage of nominated and selected students as in the entire school system).

The term "Hispanic" is used to describe people with origins in Puerto Rico, Mexico, Cuba, Latin America or Spain. Given the diversity of backgrounds implied by the term, educators are well advised to recognize that there exists no single, distinct model of the Hispanic family. Nevertheless, some general traits that help to identify gifted Hispanic children are listed below (Bernal, 1979; Meeker & Meeker, 1972):

- rapid acquisition of English,
- exhibition of leadership in an unobtrusive manner,
- demonstration of "street-wise" behaviors,
- acceptance of responsibilities usually reserved for older children,
- knowledge of how to "make it" in an Anglo world, and
- possession of strong figural abilities and memories.

Bernal (1974) identified nine differences between gifted and nongifted Hispanic children, which could be used to form a behavioral rating scale or checklist. Gifted Hispanic children are more likely than nongifted Hispanic children to:

- be sought after by other children,
- understand and remember detailed instructions when they are given the first time,
- accept what parents tell them without question or without talking back when being corrected for doing something wrong,
- show self-discipline by not eating a snack right before a meal,
- make very high grades in school,
- take care of personal belongings, e.g., returning toys to their proper place when play is finished,
- use a large vocabulary for their age,
- learn things more quickly than other children do, and
- speak correctly with good grammar for their age.

Historically, Hispanic children have demonstrated a lower rate of achievement than their Anglo-American counterparts on English standardized reading tests. Language barriers, prejudices of Anglos and other factors have contributed to the poor academic and standardized test performance of Hispanic children in school. This has caused many Hispanic children to be placed in low-level classes and to experience a slow rate of promotion. For the gifted Hispanic child it has meant virtual exclusion from mainstream programs for the gifted and talented.

When Spanish-speaking children encounter written language (i.e., standard written English) in their school experience, they find that the syntax is different from the language they are accustomed to hearing. Furthermore, written language does not contain the contextual clues that speech does, as speakers stress patterns, facial expressions or physical referents for the vocabulary. DeBernard (1985) suggested that when gifted bilingual children lack prior experience to help them understand what they have read, they misinterpret textual material and perpetuate comprehension errors. Thus, as long as English reading

test scores continue to be used as a major criterion for entrance into gifted programs, the cost for many of the brightest bilingual children will be exclusion from those programs.

To make their tests more appropriate for Hispanic students, some formal test publishers have translated their achievement and intelligence tests into Spanish. Some of the translated tests include the Comprehensive Test of Basic Skills, Group Inventory for Finding Creative Talent and WISC-R. Another option is SOMPA (Mercer and Lewis, 1978), which assigns a certain number of "bonus points" to WISC-R or WPPSI scores for Hispanic students. Other tests recommended in the National Report on Identification (Richert, et al, 1982) include the Cattell Culture Fair Intelligence Series, Ravens Progressive Matrices, Cartoon Conservation Scales and Stallings Environmentally Based Screen. It is wise to utilize local as well as national norms when interpreting these tests.

The poor performance of bilingual Hispanic children on formal tests makes it imperative that informal measures also be used to identify gifted children from this population. Parent and teacher rating scales may be especially helpful. Parents should be given questionnaires in their native language, to avoid misunderstandings. Parent and teacher checklists and rating scales may be adapted, including questions related to the aforementioned characteristics. As with all underserved populations, it is important to provide inservice training to teachers regarding the traits of Hispanic children.

In addition to rating scales and checklists, other types of informal measures may be helpful. Peer nominations, product samples, auditions, interviews, biographical information and student grades all may be useful in identifying gifted Hispanic children. These measures provide qualitative information to provide a more comprehensive "picture" of the student than is possible with formal test scores alone.

OTHER RACIAL/ETHNIC GROUPS OF STUDENTS

Many school corporations in Indiana have significant subpopulations of ethnic groups other than white, black or Hispanic. These include children from Greek, Indian, American Indian, Asian, European, Middle Eastern, African, Amish, Mennonite and other backgrounds. Many of these students are bilingual or have limited skills and experience in the English language. These students generally do poorly on traditional tests, which are highly verbal in nature. Therefore, in order to include these children in the gifted/talented program, special procedures may need to be developed to identify them.

The general guidelines presented in Table 9 on page 72 are applicable to the identification of students from any ethnic group. Special techniques may need to be developed for the needs and characteristics of specific ethnic groups. As with identification procedures for the majority population, it is important to maintain a match between the procedures and the program being provided. It is helpful to develop a list of the characteristics of students from the specific population. This list can then be utilized to help determine which identification procedures will be most beneficial. Finally, educators should always maintain a respect for the values and customs of the culture group with which they are working.

An example of how to apply the general guidelines to a specific subpopulation may be seen in the procedures developed by one school corporation in northern Indiana. Approximately 40% of the elementary students in this corporation are from Amish homes. Many of the children speak a Dutch dialect rather than English. Although most of the Amish children do not continue in school past the 8th grade, a high percentage do enter kindergarten and remain throughout the elementary years. The gifted/talented program coordinator has noted the following characteristics of the Amish students in this corporation:

- Dutch-speaking upon entering school, but acquire proficiency in English within 2-3 years,
- highly modest,
- demonstrated love of learning that is fostered in the home,
- high motivation for the work ethic (do not like "fun and games" activities),
- strong in quantitative skills,
- strong emotional controls (subdued, calm and serene attitudes demonstrated),
- abilities in *all* academic areas for artistically talented students, and
- honest, open and frank in their interpersonal relationships.

Given these characteristics, a number of specific procedures were developed for identifying gifted Amish children. Before they enter school all Amish children are given a screening test in their native Dutch dialect. A corps of volunteers from the Amish community are trained to help administer the test. This instrument consists of a combination and adaptation of items from several standardized measures; local age norms, developed over several years, are used to evaluate student

performance. Amish students are compared only within their subpopulation; they are not compared to the majority population. (Ed. note: Adaptation of standardized measures is not generally recommended for those without a thorough background in psychometrics.)

The kindergarten and first grade teachers provide a recommendation by completing a checklist of student behaviors. The instrument is an adaptation of the Renzulli Scales, and contains items relating to academic ability, task commitment, creativity and social relationships. Results from the Metropolitan Achievement Test are combined with information from the pre-kindergarten screening test and the teacher checklist to obtain the "pool" of nominated students. The educational needs of nominated students then are evaluated using the Ravens Progressive Matrices, the Slosson Intelligence Test and the Reading and Information cluster scores from the Woodcock-Johnson Psychoeducational Battery. All data is placed on a matrix, given a weight from 1 to 3, totalled and the total score is compared to a selection criterion.

Gifted Amish students usually are placed into the program at the end of first grade. The identification procedures are validated by examining later achievement test scores, teacher checklists and student grades. In addition, results from the SOI-Gifted Screening Form are evaluated.

Parent permission is obtained at all stages of the process. This is important in any program, but is doubly so when dealing with a subpopulation whose values or customs differ from those of the majority population. Demonstration of sensitivity to the different value systems of special ethnic populations is especially helpful for public relations as well as for identification purposes.

The gifted/talented program coordinator in this school corporation has found that the specific identification procedures described above usually are not necessary for Amish students beyond grade two. By grade two, most of the Amish students have assimilated the language and culture of the majority "English" population. Therefore, they can be identified successfully and placed using the same procedures as those used for all other students. Special procedures only need to be utilized for a specific ethnic group when that group is underserved or under-represented in the gifted/talented program. In this example, Amish students above grade two are not underserved and, therefore, the special techniques are not necessary to identify them.

Asian students are another minority group that often are well-represented in gifted/talented programs. In fact, in the evaluation study of Indiana gifted/talented programs conducted through the Indiana Department of Education by the University of Illinois in 1986, Asians were overrepresented in several programs, and were not underrepresented in any of the surveyed programs. Results from the most recent (1989-90) Midwest Talent Search also indicated an abundance of highly able Asian students in Indiana. Although Asian students appear to be well-represented in programs around Indiana, it is possible that they still are underrepresented in specific programs. Thus, it is important to remain vigilant in using specific procedures to find the talents hidden in Asian and all other minority ethnic groups of students.

FEMALE STUDENTS

It almost seems ironic to include gifted females in a section on underserved populations. In global reports of gifted program participation, girls achieve equal or greater status than boys in their representation. Gifted females, however, are far less likely to be involved in gifted programs at secondary levels in general, and in mathematics and science programs in particular, than are their male counterparts.

Despite the fact that girls in high school earn high grades and teacher ratings in math and science courses, they are often perceived by teachers, peers and themselves as deficient in these content areas. Consequently, the achievement of females in math and science-related careers is significantly lower than that of males. There are few females who enter these fields, and fewer still who achieve fame or economic recognition equal to their male counterparts. This is due, to some extent, to the negative stereotypic attitudes and expectations that parents, teachers, counselors and the students themselves have about the aptitude of females in mathematics and the sciences. Because of the pervasiveness of the problem, it is essential that special attention be given to this concern when attempting to identify females, particularly at the secondary levels in the areas of mathematics and science.

In general, the behavioral characteristics of gifted girls are no different from those of gifted boys. Similar behaviors exhibited by the two sexes, however, may be perceived differently by parents and teachers (Torrance, 1959). This probably reflects the stereotypic behavioral differences associated with each sex. Females are not expected to excel in the areas traditionally associated with male dominance.

Adolescence increases the pressure on gifted females to conform to those stereotypes. It may not be considered "feminine" to excel in mathematics or science. Intellectual competition with males in any area may be viewed as less and less desirable by females as they get older. The awareness of, and pressures from, sex-role stereotypes can increase the likelihood of disguising talent deliberately by the time girls enter the late intermediate grades. Such masking further inhibits the identification of gifted females in general, and those with specific aptitudes in math or science in particular.

To address these problems, several steps can be taken. Teachers, counselors and parents should be made aware of the stereotypes that deter females from participation in technical, scientific and mathematical disciplines. In addition, women who have selected nontraditional careers may be included on screening and selection committees. Females who have overcome the barriers of stereotypic career expectations may be less likely to be influenced by them in making placement decisions.

Another option is to include reports from aptitude and achievement tests taken during previous grade levels. Earlier test scores may help to discover a pattern of descending achievement, particularly in math and science, that might signal the masking behaviors seen in secondary grades. Finally, efforts should be made to counsel gifted females and their parents regarding career choices and the dangers of opting out of academically demanding tracks.

SEVERELY PHYSICALLY IMPAIRED STUDENTS

A handicapped child is one who differs from the average child in sensory abilities, communication skills or physical characteristics to such an extent that the child requires a modification of school practices, or special educational services, to develop to maximum capacity (Kirk and Gallagher, 1986). Specific disabilities may include cerebral palsy, multiple sclerosis, polio, spinal cord injuries, orthopedic handicaps, etc. The handicapped population is often characterized by the impairment or lack of those very abilities which distinguish gifted students. It is, therefore, quite understandable that few handicapped students are referred to programs for the gifted and talented.

The inability to see or hear test instructions, or to respond verbally or manually to them, is a major problem for many disabled people. It is evident that the behaviors associated with specific disabilities are major obstacles in identifying gifted handicapped students. Nevertheless, it is important that such students are identified and provided with an education appropriate to their cognitive needs and abilities. One only needs to reflect upon the tragic case of John Merrick (the "Elephant Man"), or the triumphs of Itzhak Perlman and Helen Keller, to see the importance of appropriate educational opportunities for the handicapped.

The largest obstacle to identification occurs with students who have difficulty with speech and language, because traditional verbal instruments may be inappropriate for assessing their abilities. Some individualized intelligence tests (e.g., the Peabody Picture Vocabulary Test, Ravens Progressive Matrices and Advanced Progressive Matrices, WISC-R and Stanford-Binet) may be adapted for use with handicapped students. Achievement tests and other multiple-choice tests sometimes may be adapted for students who can point to the correct alternative from a list. Some nonverbal tests may be adapted, although many are timed or require hand usage for manipulation of objects. In almost all cases, handicapped children must be assessed individually by a trained psychological examiner. Test scores should not be compared with the published national norms, which are standardized on nonhandicapped populations. Instead, students' performances should be compared with those of others with similar disabilities.

In addition to testing on traditional formal instruments, informal measures may be helpful for identification of gifted handicapped students. Some rating scales or checklists, such as the Renzulli Scales or Torrance's Checklist of Creative Positives, may be adapted for use with parents or teachers of handicapped children. Assessment of student products, interviews, nomination procedures, biographical information and student grades can provide additional evidence of student abilities. Parents, peers and the students themselves can provide a wealth of information about out-of-school behavior. Finally, handicapped students may be placed provisionally in a gifted program, or be involved in activities which will foster the development of higher-level thinking abilities. Their performance and progress can then be evaluated by a trained teacher.

According to Barraga (1983), "A visually handicapped child is one whose visual impairment interferes with his [her] optimal learning and achievement unless adaptations are made in the methods of presenting learning experiences, the nature of the material used and/or in the learning environment."

This definition describes all degrees of visual impairment, from partial sightedness to total blindness.

The visually handicapped constitute a very small proportion of exceptional children. Blind people are likely to be isolated socially from the mainstream of society because they lack mobility and because the public tends to avoid social interaction with them. This limited direct contact with blind people perpetuates the many stereotypes associated with them. Chief among these is the belief that the blind are helpless, dependent on others for their survival, incapable of earning a living and, therefore, in need of charity.

Research (Tilman and Osborne, 1969) has shown that blind children:

- retain specific experiences as well as, but in a less integrated fashion than do, sighted children;
- score the same as sighted children on activities relating to arithmetic, information, vocabulary and numerical ability, but do less well on activities involving similarities and social comprehension skills; and
- utilize vocabulary that consists of sterile definitions, while that of sighted children is more elaborative and richer in meaning.

Although blind children perform as well as sighted children on the verbal portion of some standardized tests, they often have fragmented or distorted understanding of simple concepts.

The most obvious adaptation to accommodate the visually impaired is the use of instruments that do not require visual input, i.e., tests with verbally administered, nonmanipulative items. The verbal scale of the WISC-R is the most widely used test to measure the intellectual abilities of the visually handicapped. Because blind children have not been exposed to acculturation experiences comparable to those of sighted children, it is quite likely that the test scores obtained by blind children are an underestimate of their intellectual potential. In addition, the WISC-R does not have norms for the blind.

Several achievement tests exist that have been specially adapted for the visually handicapped with Braille and large print forms. These include the Stanford Achievement Test, the Iowa Tests of Basic Skills and the Scholastic Aptitude Test. Another option is the Blind Learning Aptitude Test, which involves cutaneous-kinesthetic exploration to solve problems. Modified tests of verbal creativity can provide evidence of divergent thinking abilities. The American Printing House for the Blind may be contacted regarding the availability of other test adaptations. It

should be noted that reading Braille requires twice as much time as reading print. There should, therefore, be no time limits placed on visually handicapped test takers.

Teachers, parents and the students themselves can provide the most valid and reliable information about the intellectual abilities of visually handicapped children (Whitmore & Maker, 1985). Teachers who have had experience with the visually handicapped are best able to compare an individual's learning ability with that of similarly disabled children. Interviews, checklists and rating scales are useful ways to collect this information. Other informal measures, such as student products, biographical information, grades and so on, also can be used to obtain a comprehensive assessment of a student's needs and abilities.

HEARING IMPAIRED STUDENTS

Hearing impaired children present special problems to educators because a hearing loss interferes with the reception and production of language. The degree of hearing loss is one factor which affects the school success of hearing impaired students. An equally important factor is the timing of onset of the loss. The most serious educational problems are associated with cases in which the hearing loss occurred prior to the spontaneous acquisition of speech and language. This inability to hear and express oral language is a major barrier to the development of concepts and to the academic achievement of hearing impaired children.

As a group, deaf children read three to eight years below the level of hearing children; of those over 16 years of age, 60 percent read below grade level and 30 percent are functionally illiterate (Williams & Vernon, 1970). Deaf students who are achieving at or near grade level (relative to hearing students) are good candidates for identification for gifted programs.

The learning problems of the deaf are associated with their language difficulties rather than with their cognitive functioning. Many deaf students overcome that language difficulty by becoming proficient at producing and understanding American Sign Language. Despite this, deaf students may suffer a disadvantage on verbal tests and tasks. For this reason, nonverbal tests are commonly used to assess the cognitive abilities of hearing impaired students.

The performance scale of the WISC-R is the instrument most frequently used with the hearing impaired. Because the test has no pantomime instructions and has timed elements which are difficult to convey to a deaf person, the score obtained is a rough estimate of the subject's ability. The Leiter International Performance Scale was developed exclusively for measuring the intelligence of deaf children. The Ravens Progressive Matrices and Advanced Progressive Matrices also have been used successfully. Another option is to utilize tests with visual analogies and other tasks that measure visual learning. Finally, creativity tests (such as the Torrance Tests of Creative Thinking) may be useful with this population. The major criticism of all of these instruments is that they measure a narrow range of abilities. The WISC-R and the Ravens also do not have norms for the hearing impaired.

Informal measures and observation are likely to provide some of the best indications of giftedness in this population. Teacher and parent information regarding reading, oral and written communication skills and creativity of students can be obtained. Student products, interviews, biographical data and grades can provide additional information. The creative coping skills utilized by the deaf to overcome their handicaps may also be a useful indicator of their giftedness.

LEARNING DISABLED STUDENTS

According to the definition that has been used over the last few years, a learning disability is a significant discrepancy between performance (usually measured by an achievement test) and potential (as measured by an individual IQ test). Many educators consider a "significant discrepancy" to be a difference of at least one standard deviation between potential and performance in any subject area. The federal definition in PL 94-142 requires that the discrepancy not be primarily attributable to other handicapping conditions such as a sensory impairment, motor handicap, mental retardation, emotional disturbance or environmental disadvantage. If such a discrepancy is suspected by the classroom teacher, the student is referred for assessment.

There are many obstacles to the identification of gifted learning disabled (GLD) students. The first barrier to identifying GLD students is that many of them are able to maintain achievement at or near grade level. GLD students may be particularly difficult to identify because their disabilities often mask their abilities. Conversely, they may have developed certain abilities to an exceptionally high degree in order to disguise or cover up their disabilities. Consequently, both the giftedness and the disabilities of such students may go unrecognized.

Another barrier to the identification of GLD students is the inadequacy of group measures for screening this population. Group tests can seriously underpredict the actual abilities of many gifted students, and for those who are also learning disabled, the inaccuracy and underprediction is compounded. Group tests require a high proficiency in silent reading, freedom from distractibility, long attention span and hand-eye coordination. These skills are often difficult for many learning disabled students (Mercer, 1973). It is for these reasons that students who are suspected of having learning disabilities are given individual measures to assess their potential and performance. The most commonly used measure of potential is the WISC-R; significant differences in subtest scores may indicate the presence of a specific learning disability.

Another problem occurs because teachers often are unable to view learning disabled students as possibly being gifted. The performance of GLD students may be inconsistent with common views of what gifted children should be able to do. Some of the areas in which deficiencies may be displayed are:

- oral reading,
- writing—difficulty in transferring thoughts into written format, poor handwriting,
- listening—weak auditory discrimination skills, inability or unwillingness to follow directions,
- task commitment—easily distracted, generally uncommitted to educational tasks,
- hyperactivity or under-activity,
- social skills,
- problem solving—inflexible strategies, and
- motivation.

Finally, consistent failure or inferior performance may cause students to withdraw

from active school participation. Examples of withdrawal behaviors include minimal communication with peers or teachers, daydreaming, working alone, lack of involvement in class activities and unwillingness to engage in self-defense (Whitmore and Maker, 1985).

Given these difficulties, how can GLD students be identified adequately? Some of the methods employed in good general identification practices will assist in identifying students for referral to gifted and learning disability assessments. Some options to increase the likelihood of discovering these students include:

- sensitizing teachers to look for behaviors associated with learning disabilities by providing lists of behaviors that have been associated with GLD students, such as the following (Whitmore, 1986):
  - superiority in comprehension and retention of concepts, learning quickly and easily when interested,
  - vitality of imagination, creativity especially in the arts,
  - large repertoire of "facts," knowledge independently acquired, usually through experience outside school,
  - superior oral expression, advanced vocabulary and concepts,
  - acute sensitivity, perception at a level beyond his/her years,
  - perfectionism, severe self-criticism,
  - wide range of interests outside of school, or profound interest in a single area, and
  - initiative in pursuing self-selected subjects for fun at home or school;
- soliciting detailed information from parents concerning medical history, temperament, hobbies and interests;
- examining the level and type of compensating strategies, as evidence of advanced problem-solving ability. Examples include:
  - highly developed aural memory,
  - attempts to redefine problems in terms of areas of strength,
  - manipulation of the environment, teachers and other students to avoid confronting weaknesses;
- providing alternate product outcomes to allow students to express strengths such as superior spatial ability, verbal creativity in oral productions or mechanical aptitude and evaluating these products for evidence of superior ability;
- utilizing teacher observations in the classroom. Teachers should look for student strengths as well as weaknesses. Performance in preferred free-time activities may provide helpful clues about potential abilities;
- allowing GLD children to qualify for screening by showing either high potential or high performance; using a wide variety of formal and informal measures for screening;
- soliciting peer and self-nominations; and
- utilizing creativity measures or tests of nonverbal reasoning.

UNDERACHIEVING STUDENTS

Although many educational practitioners believe that there is a difference between learning disabled and underachieving students, most researchers do not make this distinction. In fact, the terms "underachieving" and "learning disabled" have become almost synonymous to many researchers (Boodoo, et al, 1989). Those researchers who do distinguish between the two (e.g., Whitmore, 1980) tend to see learning disability, as well as physical and emotional handicaps, as a cause of underachievement.

Many educational practitioners, however, conceptualize underachievement separately from learning disability. Some practitioners conceive of the difference as a matter of degree: underachieving students are those whose performance deficit is not great enough to label them as learning disabled. Other practitioners believe that the difference between the two groups is motivational: LD students do not achieve because they cannot; underachieving students do not achieve because they will not. In any case, all persons involved agree that both LD and underachieving gifted students must be identified as early as possible, in order to assist them in mastering the basic skills (e.g., reading, addition, etc.) necessary for later learning.

Because underachievement frequently is conceptualized in a similar manner to learning disability, the techniques for identifying gifted students with either problem are basically the same. That is, the child's potential, as demonstrated on an individual IQ test, is compared to his/her actual performance on an achievement test or in the regular classroom. Other, more informal methods are also available, as previously described in the section on learning disabled students.

A few informal measures have been developed specifically to help identify underachievers. Rimm has developed the Achievement Identification Measure (AIM), a parent interview form, and the Group Achievement Identification Measure (GAIM), a self-report inventory for students. In addition, the Group Inventory for Finding Creative Talent (GIFT) has been reported to be useful in identifying creative talents in underachieving students. Finally, Whitmore (1980) has published a teacher checklist and a teacher rating scale to help identify gifted underachievers.

HIGHLY GIFTED STUDENTS

Who are the highly gifted? Dr. Joyce Van Tassel-Baska (1981) defined the highly gifted as youngsters who have IQs of 142 or more, manifest 90 to 100% of the g/t characteristics or function at more than three and one-half grade levels above their age group. Children with abilities in this high range need even more educational intervention than do other gifted and talented students. Administrators, teachers and parents need to determine a child's ability level and then take appropriate action to create an individualized education plan (IEP) for that particular child.

As would be expected, the number of highly gifted students is small. Feldman (1987) suggests that in a school of 500 there would be two or three students who score at or above 140 IQ. Webb, Meckstroth and Tolan (1982) offer the following ratio of highly gifted to the general population:

- 1 out of 260 people may have an IQ of 140 or above.
- 1 out of 2,330 people may have an IQ of 150 or above.
- 1 out of 31,560 people may have an IQ of 160 or above.
- 1 out of 652,600 people may have an IQ of 170 or above.
- 1 out of 2,000,000 people may have an IQ of 180 or above.

A survey of Indiana school corporations (Langsam and Rebhorn, in press) uncovered highly gifted students in all parts of the state, in rural, suburban and city schools. There were minority students included in the group. Although actual figures were impossible to determine, it is clear that Indiana, with its K-12 population of approximately one million students, should anticipate a highly gifted population of at least 3000 within the state. There is general agreement, however, that the programs in Indiana primarily address the needs of the middle and moderately gifted. The 1986 evaluation of Indiana's g/t programs done by the University of Illinois found that the highly gifted are ill-served, are not in gifted programs or have left the public schools for home study or to attend private schools. Yet it is important that public schools do identify and provide individualized services to highly gifted students.

The best single instrument to identify the highly gifted is the Stanford-Binet Intelligence Scale, Form L-M. Note that this is not the most recent version of the Stanford-Binet. The most recent version has a low ceiling and therefore is inadequate for the purpose of discriminating among students of extremely high ability.

Because of the lack of individualized testing in many schools, parents frequently have their children tested on their own initiative. Schools, however, may be uninterested in the results of testing performed elsewhere, being uncertain of the procedures used or of interpreting the results. It is crucial to establish a procedure for utilizing external testing if the school wishes to identify and serve highly gifted students but cannot afford to provide multiple administrations of the Stanford-Binet L-M. Apart from the Stanford-Binet L-M, there is little agreement on particular for-

mal instruments that are useful for identifying the highly gifted.

Another option for assessing the abilities of highly gifted students is the use of off-level achievement tests. Unfortunately, most achievement tests (including ISTEP) do not provide off-level norms, so interpretation of scores is difficult. Nevertheless, off-level tests may provide information that is useful for developing IEPs. One instrument that does have off-level norms is the Scholastic Aptitude Test (SAT). Normally taken by high school juniors, the SAT is administered each year to high-achieving middle school students as a part of the Midwest Talent Search. The scores from this off-level assessment can indicate exceptional ability. For instance, a combined score of 1100 would be roughly equivalent to that of the top ten percent of college-bound high school seniors, and would be a clear demonstration of exceptionality. Comparable subscores would be 630 on the math portion or 580 on the verbal portion of the test.

The highly gifted student in the fine arts can probably best be identified by expert practitioners in the field. These evaluators can assess the talents of individual students through the use of portfolios or performances. Another method of initial screening is the demonstration by the child of atypical behaviors or achievements. A significant number of highly gifted students teach themselves to read at very early ages, make notable progress in academic subjects without instruction or become highly proficient on a musical instrument. If a parent has maintained a written or visual record of such developments, schools should review them to add to the depth and breadth of information available about the child. Confirmation by other adults, such as teachers in school or day-care facilities, is helpful, as are reports from art and music instructors.

Finally, teachers of the gifted can identify students whose abilities exceed those of other gifted children. Observations made by g/t teachers or the identification team can provide useful information. Students and their parents can be interviewed regarding extracurricular activities and abilities. These informal measures can provide data which will be useful in developing the IEP for individual highly gifted students.❑

Table 10. Specific Identification Procedures for Different Underserved Populations

Economically Disadvantaged Students

- Use nonverbal or "culture fair" tests
- Lower criterion scores for certain geographical areas in the district
- Award bonus "points" to test scores (SOMPA model)
- Use local as well as national norms
- Use a variety of informal measures
- Inservice teachers

Rural Students

- Ignore subtests of standardized tests that do not discriminate among gifted students
- Use untimed, nonverbal tests of intelligence
- Use measures of spatial relations and mechanical aptitude
- Use a variety of informal measures
- Inservice teachers

Black Students

- Use tests that have been renormed for the black population
- Award bonus "points" to test scores (SOMPA model)
- Use local as well as national norms
- Use nonverbal or "culture-fair" tests
- Use a variety of informal measures
- Inservice teachers
- Use the forced-choice procedure
- Strive for (but do not force) identification of a representative proportion of the black student population

Hispanic Students

- Use tests that have been translated or renormed for the Hispanic population
- Use nonverbal or "culture-fair" tests
- Award bonus "points" to test scores (SOMPA model)
- Use local as well as national norms
- Use a variety of informal measures
- Inservice teachers
- Use the forced-choice procedure
- Strive for (but do not force) identification of a representative proportion of the Hispanic student population

Table 10. Continued

Other Racial/Ethnic Groups of Students

- Utilize the general guidelines for identifying giftedness among underserved populations (Table 9)
- Develop a list of characteristics of students from the ethnic group; use this list to help determine specific procedures
- Use a variety of informal measures
- Inservice teachers
- Use local norms if national norms do not apply
- Use nonverbal or "culture fair" tests
- Compare student performance to that of others in the subpopulation
- Strive for (but do not force) identification of a representative proportion of the subpopulation

Female Students

- Inservice teachers and counselors, especially at the secondary level
- Include women with nontraditional careers on the screening and selection committees
- Use formal test scores from previous years
- Counsel female gifted students

Severely Physically Impaired Students

- Use tests that can be adapted to accommodate the physical handicap of the student
- Do not adhere to time requirements of tests
- Compare student performance to that of others with similar disabilities
- Use a variety of informal measures

Visually Impaired Students

- Use tests that do not require visual input
- Use Braille or large print forms of tests
- Do not adhere to time requirements of tests
- Use a variety of informal measures
- Compare student performance with that of other visually impaired students

Hearing Impaired Students

- Use nonverbal tests
- Use tests of visual learning and creativity
- Use a variety of informal measures
- Compare student performance with that of other hearing impaired students

Table 10. Continued

Learning Disabled Students

- Identify students as early as possible
- Use individual measures of potential and performance
- Inservice teachers
- Solicit detailed information from parents
- Examine the level and type of compensating strategies
- Utilize teacher observations in the classroom
- Use a variety of formal and informal measures for initial screening
- Allow either potential or performance to qualify a child for screening
- Solicit peer and self-nominations
- Use creativity measures or tests of nonverbal reasoning

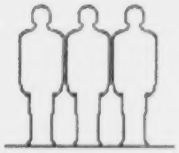
Underachieving Students

- Identify students as early as possible
- Use individual measures of potential and performance
- Inservice teachers
- Solicit detailed information from parents
- Utilize teacher observations in the classroom
- Use a variety of formal and informal measures for initial screening
- Solicit peer and self-nominations
- Use creativity measures or tests of nonverbal reasoning
- Use the AIM, GAIM, GIFT or Whitmore's (1980) teacher checklist or rating scale

Highly Gifted Students

- Use the Stanford-Binet Form L-M
- Develop a written policy regarding acceptance of results from private, external testing
- Use off-level achievement tests, e.g., the SAT
- Utilize expert evaluation of portfolios or performances for visual/performing arts abilities
- Utilize parent reports of atypical behaviors or achievements, especially if confirmed by other adults
- Use observations by g/t teachers or the identification team
- Use student or parent interviews
- Develop IEPs for individual highly gifted students, and include the student and their parents in this process

Chapter 7



Inservice of Staff

After selecting the instruments and procedures to be used in the identification process, the next step is to inservice the staff members who are to be involved in the process. This might include teachers, principals, committee members and other interested parties. For a new or young program, the inservice might cover topics such as the characteristics of gifted/talented students, philosophy of the program and services to be offered and identification procedures to be used. The inservice would cover in-depth any instruments which participants are expected to complete (e.g., nominations, rating scales). For a more established program, the inservice provider might review selection procedures, point out changes that have been made, briefly review the characteristics of gifted/talented students (helpful for new staff members) and point out characteristics and procedures for identifying students from underserved populations.

Research (Gear, 1978) has demonstrated that the accuracy of teacher nominations can be improved significantly with specific inservice training. Gear found that teachers who received training identified an average of eight out of ten confirmed gifted students, compared to a lower rate prior to training. With this in mind, it is apparent that inservice training for teachers and principals is crucial to the success of any program for gifted students. The following materials, which are designed to facilitate this training, include planning, avoiding common problems, addressing common concerns and developing overheads and handouts.

Providing a staff inservice requires some skill and planning. In general, the gifted/talented program coordinator is the one who plans the inservices. This coordinator might:

- review the local personnel files to identify and locate resource people,
- review the local gifted and talented philosophy,
- compare local gifted/talented definitions with the state definition,
- define the purpose for implementing the identification procedures,
- review the materials provided in this ID Guide and assess their relevance to the local situation,
- investigate the possibility of offering stipends to teachers for training time,
- investigate the possibility of scheduling the inservice meeting as part of a regularly scheduled building-level faculty meeting,
- investigate the possibility of offering refreshments at the inservices,
- review materials from the Shared Information Services centers to obtain other ideas for activities,
- schedule meeting rooms, audiovisual equipment, guest speakers (if applicable), etc.,
- provide handouts, nametags and other supplies, and
- obtain demographics of the school population to determine "special groups" to emphasize.

COMMON PROBLEMS TO AVOID

Listed below are some common problem areas that have been reworded positively as goals and suggestions that will assist in accomplishing the goals.

GOAL	SUGGESTION
Clear communication of the purpose of having a program for gifted students.	The superintendent or broad-based planning committee chairperson might offer a brief statement of purpose that reflects the need for this program. This should occur before beginning any inservice sessions.
Clear and accurate communication of who makes decisions throughout the identification process.	Review the selection procedures and identify by name those persons who make decisions at each step.
Clear statement of the purposes for inservice training.	When announcing the inservice session, include a statement of purpose.
Strong base of support among building- or district-level administration.	Appropriate district administrators may serve on the screening committee or the appeal/review committee. Keep them involved through regular communication and relevant training sessions.
Communication about the new gifted/talented program and the identification process.	There will always be individuals who need this information but who cannot attend a training session. Develop a brochure which describes key facts about the program, identification procedures and who to contact for further information. Consider audiotaping or videotaping meetings to share with people who are unable to attend them.
Strong staff interest in attending inservices after several years.	Vary the topics and activities from year to year. Provide a separate inservice for new staff members, compact repeated material for other staff members and go into more depth with new procedures, especially those related to identification of underserved populations. Allow staff members to choose some inservice topics. Ask staff for feedback on effectiveness of and ways to improve selection procedures. Make the room and time as pleasant and convenient as possible and offer refreshments.

COMMON QUESTIONS AND CONCERNS

Administrators and teachers will have some apprehensions about a program for gifted students. Listed below are some questions often asked by these people and some possible responses.

Won't these students make it on their own?
When no attention is given to the unique needs of gifted students, they often become underachievers with low aspirations. Some gifted students do not even complete high school. Researchers have found that many gifted students do not make it on their own in regular school programs. Gifted students, in fact, may be "at risk" for underachievement, dropping out or turning to crime.

Aren't special programs such as this one undemocratic and elitist?
This question is basically philosophical. If democratic educational practice is interpreted as the same education for all, then the answer is "yes." If we believe that democratic education means appropriate, equitable educational opportunities and the right to education in keeping with the individual student's ability to benefit, then the answer is "no." Obviously, educators are concerned about meeting the learning needs of all students in their classrooms, and programs for gifted students can assist with these efforts.

Isn't a good program for the gifted student a good program for all students?
Gifted students who are advanced some years beyond their peer group need to work with content and ideas appropriate for them, but beyond the capacity of their peers. Although some specific activities and concepts taught to the gifted are appropriate for all students at some age, the level of expectancy for reading assignments, product outcomes and classroom achievement is much higher in a gifted/talented program than in the regular classroom. Non-gifted students generally cannot meet these expectations and would not succeed in this type of program. The regular school curriculum meets their educational needs. The needs of gifted/talented students, on the other hand, are best met by differentiated curriculum that will challenge them to achieve their full potential.

Won't this result in a "brain drain" and leave regular classes with slow kids?
Research has shown that when highly gifted students are removed from the regular class, the level of aspiration of the remaining students rises significantly. Another way to approach this problem is to develop a graph showing how many students obtained different percentile levels on an achievement test. Separate graphs could be made for different classrooms or grade levels. Highlight the local average score. Remind the participants that out of this group at this building or in one classroom you might be talking about only two or three children being placed in the program, and that would leave ___ others who are bright and above average. Thus, there are many potential, positive role models.

Do special programs for gifted students make a difference?

Studies and practical experience in many programs over the past 20 years have shown that gifted students of all ages obtain greater gains in special classes than in regular classroom programs. These benefits have been noted in the academic, social and emotional development of the students.

If gifted students are being pulled out of my class, does it mean that I am a poor teacher?

Not at all! Students with other special needs (speech, reading, etc.) are also pulled out for extra help. This simply means that the students are receiving extra assistance for their unique needs. In fact, a good teacher attempts to discern and assist in meeting the varied needs of students in the class, and a gifted/talented class may be one available vehicle.

Isn't this just another "pull-out," something else to wreck my schedule?

To elementary teachers it often seems as if the whole class is present only at 8:00 a.m. The remainder of the day is fragmented by various "special" classes. Skillful inservice which stresses the need for individualized teaching can help teachers learn how to handle this type of instruction. These "pull-out" sessions can then be seen as a positive addition to the schedule.

How can I know what becomes of the students who were placed that I recommended?

Request that the following year teacher have the student write a letter at the end of each school year to the teacher who recommended them for placement. This letter might describe what the student has done in school, contests entered, prizes won, etc. Such letters not only improve teacher/student relations, but also help to build cross-district communication. Former teachers will see themselves as quite important to the child's progress. Once the program is implemented, teachers of the gifted could be asked to volunteer to speak at faculty meetings and to share some work samples as well as behavior traits of successful gifted and talented students. Such activities will help to facilitate future identification efforts and to improve teacher awareness of the products produced by gifted students.

The remainder of this chapter contains information sheets which may be developed into overhead transparencies or handouts at local inservices. These samples are by no means exhaustive; educators should feel free to adapt them or to search out others which might be more helpful in meeting local needs. (Permission is granted to reproduce or alter any of the samples.) In addition, audience participants will need to receive copies of local forms and instruments which they will be using (e.g., nomination forms and rating scales).❑

Sample 12. Attributes Often Observed in Kindergarten and First Grade Gifted/Talented Students

- Reads and comprehends simple stories
- Prints his/her name, tries to spell and write other words
- Counts rationally, recognizes and names numbers 1-20
- Recognizes and understands the value of coins
- Solves simple mathematical problems
- Writes name, address and telephone number
- Recognizes colors and their written names
- Knows right and left hand
- Prints, without copying, most letters of the alphabet
- Has intense interest in specific subjects, developed at an early age
- Highly motivated to solve different types of problems
- Likes to be with older children, and keeps up with them
- Arranges similar toys and other possessions together
- Learns easily, needs to be told something only once

Sample 13. Characteristics of the Gifted That Tend to Screen Them Out of Programs (Richert, et al, 1982)

BEHAVIORS	ASSOCIATED WITH
Is bored with routine tasks; refuses to do rote homework Is not interested in details; hands in messy work Makes jokes or puns at inappropriate times	CREATIVITY •Highly tolerant of ambiguity •Independent •Skilled in divergent thinking •Takes risks
Refuses to accept authority; nonconforming, stubborn Is difficult to get moving onto another topic	MOTIVATION •Persistent in areas of interest
Is emotionally sensitive; over-reacts, cries or gets angry easily	•Intense values and feelings •Independent
Tends to dominate others Often disagrees vocally with others about ideas or values	CRITICAL THINKING •Sees discrepancies between real/ideal, truth/expression
Is self-critical, impatient with failures Is critical about others, including the teacher	•Sets high standards •Capable of analysis and evaluation

Sample 14. **Behaviors Seen in Intellectually Gifted/Talented Students**

Characteristics	Positive Behaviors	Negative Behaviors
Learns rapidly and easily	Memorizes and masters basic facts quickly	Gets bored easily, resists drill, disturbs others, daydreams
Reads intensively	Reads many books and uses library on own	Neglects other responsibilities
Advanced vocabulary	Communicates ideas well	Shows off, invokes peer resentment
Retains a quantity of information	Ready recall and responses	Monopolizes discussions
Long attention span	Sticks with a task or project	Resists class routine, dislikes interruptions
Curious, has a variety of interests	Asks questions, gets excited about ideas	Goes on tangents, no follow-through
Works independently	Creates and invents beyond assigned tasks	Refuses to work with others
Alert and observant	Recognizes problems	Impolitely corrects adults
Has a good sense of humor	Able to laugh at self	Plays cruel jokes or tricks on others
Comprehends, recognizes relationships	Able to solve social problems alone	Interferes in the affairs of others
High academic achievement	Does school work well	Brags, egotistical, impatient with others
Fluent, verbal facility	Forceful with words, numbers; leads peers in positive ways	Leads others into negative behaviors
Individualistic, challenges ideas	Asserts self and ideas, has sense of own uniqueness	Has few friends, nonconforming, stubborn in beliefs
Self-motivated, self-sufficient	Requires minimum teacher direction or help	Is over-aggressive, challenges authority

Sample 15. Characteristics of Talented Visual/Performing Arts Students (Platow, 1984)

Visual Art • Willing to try out new materials and experiences • Combines several art media to express ideas and feelings • Quickly grasps and uses steps of a process when instructed • Demonstrates an unusually high interest in art activities • Able to perceive form, contrast and mood in the environment • Shows originality in choice of subject, technique and composition • Makes up original art products	**Theater** • Eager to participate in classroom plays and skits • Able to use voice, gestures and facial expressions to communicate feelings • Commands and holds the attention of a group when speaking • Able to evoke emotional responses from listeners • Can imitate others • Easily shifts into the role of another character • Makes up original plays or stories • Able to perceive problems and innuendos of expression when interacting with others
Music • Able to perceive fine differences in sound • Remembers melodies easily and can reproduces them accurately • Sensitive to rhythms • Shows a sustained interest in music activities • Expresses feelings through sound or music • Makes up original tunes • Enjoys forms of dancing and movement to music	**Dance** • Uses body movement frequently and easily • Has a high energy level for each movement • Expresses concepts through the use of body in space • Shows a high interest in dance or movement activities • Uses movement to recreate an emotion or environment • Displays grace and fluidity of movement • Able to explore and solve movement problems • Responds with movement to changes in stimuli

Sample 16. Motivational Characteristics
(To be used when inservicing on Renzulli Scales)

Task Commitment
Becomes absorbed and truly involved in certain topics or problems; is persistent in seeking task completion. It is sometimes difficult to get him/her to move on to another topic.

Avoids Mundane Tasks
Is easily bored with routine tasks.

Self-Motivated
Needs little external motivation to follow through in work that initially excites him/her.

Perfectionist
Strives toward perfection; is self-critical; is not easily satisfied with own speed or products.

Self-Direction
Prefers to work independently; requires little direction from teachers.

Maturity of Interests
Is interested in many "adult" problems such as religion, politics, sex, race—more than usual for age level.

Opinionated
Often is self-assertive (sometimes even aggressive); stubborn in beliefs.

Methodical
Likes to organize and bring structure to things, people and situations.

Value Orientation
Is concerned with right and wrong, good and bad; often evaluates and passes judgment on events, people and things.

Sample 17. Learning Characteristics
(To be used when inservicing on Renzulli Scales)

Articulation

Has unusually advanced vocabulary for age or grade level; uses terms in a meaningful way; has verbal behavior characterized by "richness" of expression, elaboration and fluency.

Knowledge

Possesses a large storehouse of information about a variety of topics (beyond the usual interests of youngsters his/her age).

Memory

Has quick mastery and recall of factual information.

Curiosity

Has rapid insight into cause-effect relationships; tries to discover the how and why of things; asks many provocative questions (as distinct from informational or factual questions); wants to know what makes things (or people) "tick."

Conceptual Understanding

Has a ready grasp of underlying principles and can quickly make valid generalizations about events, people or things; looks for similarities and differences in events, people and things.

Perception

Is a keen and alert observer; usually "sees more" or "gets more" out of a story, film, etc. than others.

Reading Maturity

Reads a great deal on his/her own; usually prefers adult level books; does not avoid difficult material; may show a preference for biography, autobiography, encyclopedias and atlases.

Analytical Reasoning

Tries to understand complicated material by separating it into its respective parts; reasons things out for him/herself; sees logical and common sense answers.

Sample 18. Creative Characteristics
(To be used when inservicing on Renzulli Scales)

Curiosity

Displays a great deal of curiosity about many things; is constantly asking questions about anything and everything.

Nonconformity

Generates a large number of ideas or solutions to problems and questions; often offers unusual, "way out," unique and clever responses.

Divergent Thinking

Is uninhibited in expressions of opinion; is sometimes radical and spirited in disagreement; is tenacious.

Not Afraid to Try

Is a high risk taker; is adventurous and speculative.

Mentally Mischievous

Displays a good deal of intellectual playfulness; fantasizes; imagines "I wonder what would happen if..."; manipulates ideas (i.e., changes, elaborates upon them); is often concerned with adapting, improving and modifying institutions, objects and systems.

Laughs "Insightfully"

Displays a keen sense of humor and sees humor in situations that may not appear to be humorous to others.

Courage of Opinions

Is unusually aware of impulses and more open to the irrational in self (freer expression of feminine interest for boys, greater than usual amount of independence for girls); shows emotional sensitivity.

Aesthetic Sensitivity

Is sensitive to beauty; attends to aesthetic characteristics of things.

Resistance to Role Stereotyping

Is nonconforming; accepts disorder; is not interested in details; is individualistic; does not fear being different.

Critical Questioning

Criticizes constructively; is unwilling to accept automatic pronouncements without critical examination.

Sample 19. Leadership Characteristics
(To be used when inservicing on Renzulli Scales)

Reliable
Carries responsibility well; can be counted on to do what he/she has promised and usually does it well.

Positive Self-Concept
Is self-confident with children his/her own age as well as with adults; seems comfortable when asked to show own work to the class.

Popular
Seems to be well-liked by classmates.

Collaborates
Is cooperative with teacher and classmates; tends to avoid bickering and generally is easy to get along with.

Articulate
Can express self well; has good verbal facility and usually is well-understood.

Flexible
Adapts readily to new situations; is flexible in thought and action and does not seem disturbed when the normal routine is changed.

Likes People
Seems to enjoy being around other people; is sociable and prefers not to be alone.

Takes Charge
Tends to dominate others when they are around; generally directs the activity in which he/she is involved.

Gets Involved
Participates in most social activities connected with the school; can be counted on to "be there."

Physically Fit
Excels in athletic activities; is well-coordinated and enjoys all sorts of athuetic games.

Sample 20. **Characteristics of Gifted Black Students (Gay, 1978)**

- May feel alienated by school at an early age.
- Seeks structure and organization in required tasks.
- May be slow to motivate in some abstract activities.
- May have large vocabulary inappropriate for school setting.
- May have been conditioned to suppress questioning behavior.
- Explores (in perception of relationships) better or wiser choices; reads the behavioral implications of actions.
- Makes up games and activities.
- May demonstrate extremely strong concentration due to persistent noise in home environment.
- May express displeasure at having to stop an activity.
- Has an especially pronounced need for less supervision.
- May neglect school work due to other responsibilities and interests.
- May not meet expected achievement levels.

Sample 21. Characteristics of Gifted Hispanic Students (Bernal, 1979)

- Other children always look for him/her and want to be around him/her.
- Understands and remembers detailed instructions when given the first time.
- Accepts what parents tell him/her without question or without talking back when being corrected for doing something wrong.
- Shows self-discipline in that he/she will not eat a snack just before a meal.
- Makes high grades in school.
- Takes care of things by putting them away after use.
- Uses a large vocabulary for his/her age.
- Learns more quickly than other children.
- Speaks correctly with good grammar.
- Learns English quickly if it is a second language.

Sample 22. Characteristics of Gifted Rural Students

- Speaks a nonstandard regional dialect.
- Has unique talents and out-of-school interests such as auto and tractor repair, 4-H projects or musical and performing arts.
- Less verbal in his/her oral communication skills than urban students.
- Has had very limited travel experiences outside his/her own community.
- Is relatively unaffected by the pressures of time.
- Scores higher on nonverbal than verbal intelligence tests.
- Has written products that may be of high quality in content but of poor quality in spelling and grammatical form.

Sample 23. Identification of Gifted Students With Specific Handicaps (Adapted by permission; Whitmore, 1981)

OBSTACLES TO IDENTIFICATION	KEY OBSERVATIONS
• Little or no productivity • Learning disabled (cannot read, write, spell) • Poor motor skills, coordination; writing is painfully slow, messy • Easily distracted; inattentive • Neurologically impaired	• Superiority in oral skills: vocabulary, fluency, structure • Good memory for facts and events • Exceptional comprehension skills • High analytical and creative problem-solving abilities • Advanced interests, impressive knowledge • Keen perception and humor
• Absence of oral communication skills (e.g., deaf, cerebral palsy)	• Drive to communicate through alternative modes: visual, nonverbal, body language • Superior memory and problem-solving ability • Exceptional interest and drive in response to challenge
• Behavior is "disordered"; aggressive, disruptive, off-task frequently • Extremely withdrawn, noncommunicative	• Superior oral communication skills • Exceptional capacity to devise ways to manipulate people and to solve "problems" • Superior memory and general knowledge
• Sensory deficits producing developmental delay (e.g., blind, deaf, etc.) • Difficulty conceptualizing and dealing with abstractions • Notable drive to know or master	• Exceptionally rapid response to stimulation and special education compared to others with similar handicaps • Superior memory, knowledge, problem-solving skills

Sample 24. Characteristics of Gifted Hearing Impaired Students

- Achieving at or near grade level.
- Giftedness is more likely to be seen in a deaf child raised with deaf parents.
- Possesses creative coping skills.
- Able to produce unique products in areas of interest and ability.

Sample 25. Characteristics of Gifted Visually Impaired Students

- Has difficulty integrating experiences but retains specific experiences well.
- Has difficulty with reading comprehension and activities involving similarities.
- Performs as well as sighted children on arithmetic, information, vocabulary and numerical ability subtests of intelligence or achievement tests.
- Vocabulary tends to consist of sterile definitions.

Sample 26. Characteristics of Gifted Learning Disabled Students

- Average achievement.
- Behaviors inconsistent with expected gifted behaviors.
- Successful academic and social compensating strategies.
- Tends to withdraw from some activities.
- Demonstrates superiority in comprehension of concepts, though may accomplish no work applying or reinforcing these concepts (e.g., math).
- Learns quickly and easily when interested.
- Vitality of imagination—creativity and inventiveness, often in the arts.
- Exceptionally large repertoire of "facts"—knowledge which is independently acquired, usually outside of school.
- Acute sensitivity, perceptions about self and people.
- Superior oral expression—advanced vocabulary and concepts.
- Persistent dissatisfaction with work accomplished (even in art); severely self-critical, perfectionistic.
- Has a wide range of interests outside of school; often has a profound interest in a single area.
- Shows initiative in pursuing self-selected subjects for fun at home or school.

Sample 27. Inservice Evaluation

Presenter:_____ Topic:_____

Date:_____ Time:_____

1. I am a (circle one): regular teacher, g/t teacher, building principle, central office administrator, other:

2. I am now more aware of the demographic composition of this school district than I was before this inservice ..... Yes No
   Comments: _____

3. This inservice meeting helped me understand how to identify the underserved population(s) in this school ..... Yes No
   Comments: _____

4. I believe I can now identify gifted students ..... Yes No
   Comments: _____

5. The information presented was new to me ..... Yes No
   Comments: _____

6. Most of my questions about this corporation's program for gifted students were answered ..... Yes No
   Comments: _____

7. The information was presented in an interesting way ..... Yes No
   Comments: _____

8. The information presented was easy to understand ..... Yes No
   Comments: _____

9. I believe this inservice meeting was necessary ..... Yes No
   Comments: _____

10. The best (most interesting/informative) part of this inservice was: _____

11. The worst (least interesting/informative) part of this inservice was: _____

12. Suggestions for change or improvement: _____

_____

Sample 28. G/T Awareness Assessment

1.	Gifted education is required by law in Indiana	Yes	No
2.	Teachers who are not specially trained are usually accurate in identifying gifted students	Yes	No
3.	Giftedness is best identified through the use of informal as well as formal tests	Yes	No
4.	There is a generally accepted method for identifying gifted students	Yes	No
5.	It is believed by many that IQ tests discriminate against the poor and the culturally different	Yes	No
6.	Gifted students are those who are gifted in all environment or school districts	Yes	No
7.	Behavioral data can be combined with test data to identify gifted and talented students	Yes	No
8.	Parents are able to identify gifted children more accurately than are teachers	Yes	No
9.	Identification procedures should have little to do with the program being provided	Yes	No
10.	Gifted students require special considerations because they differ from average students	Yes	No
11.	Unidentified gifted students always achieve at the top of their academic classes	Yes	No
12.	Children who are gifted are always goal-oriented, highly motivated achievers	Yes	No
13.	Conforming to classroom rules and regulations is difficult for some gifted students	Yes	No

Sample 28. Continued

14. Handicapped children are served by special educators and do not require a gifted education program ..... Yes No

15. Learning disabled children tend to be intellectually subnormal and are of no concern to educators of the gifted ..... Yes No

16. Gifted children are the best behaved students in a regular class ..... Yes No

17. Gifted students are identified primarily from among students with advantaged backgrounds ..... Yes No

18. Gifted students often have unusually long attention spans ..... Yes No

19. This school corporation does not have gifted or talented students ..... Yes No

20. This school corporation does not offer a program for gifted students ..... Yes No

Answers:

1. No	6. No	11. No	16. No
2. No	7. Yes	12. No	17. Yes
3. Yes	8. Yes	13. Yes	18. Yes
4. No	9. No	14. No	19. No
5. Yes	10. Yes	15. No	20. Depends on corporation

Chapter 8

Selection of Students

Once the planning and inservice components of the identification process are completed, the next step is to actually select the students for the gifted program. This chapter details how to accomplish this.

■ NOMINATION OF "POOL"

The first step in selecting students is the creation of a "pool" of students for consideration purposes. This may involve obtaining teacher and parent nominations and ratings, student grades, formal test scores, and so on. The purpose of creating a "pool" is to be inclusive (rather than exclusive), so it is important to include all students who may have potential need for the program. Even if a student is above the criterion score on only one measure, he/she should be included in the pool. The program coordinator should make up a master list of all students included in the pool, along with all qualifying data.

Criterion levels are intended to be used as guides for nomination and selection, rather than absolute cutoffs. For example, suppose that a corporation has set an intelligence score of 120 as its nomination criterion, but one student has a score of 118. It is probably worthwhile to put that student into the nomination pool, even though he/she missed the cutoff score. None of the currently available instruments are perfectly accurate, so criterion levels should not be utilized as strict thresholds, but rather as guides for determining which students have the greatest needs for the program being offered.

▼ SECONDARY SCREENING

After the creation of the "pool," more information is collected on each nominated student. This might entail obtaining more specific information about each student's abilities in a particular content area, interviews, and so on. Secondary screening procedures also might include formal tests (such as creativity tests) which are too costly to administer to the entire student population, but which may be useful when given to a smaller group of students.

One question that often arises is when to collect all of the data needed for nomination and secondary screening. The two most commonly used options are to collect the data at the beginning or at the end of the school year. The major advantage of gathering data at the end of the year is that teachers and peers are familiar with the behaviors of each student. (They also may have built up biases regarding individual students, however.) By gathering data at the end of the year, the students can begin in the program at the start of the fall semester rather than waiting up to a month or more to be selected. On the other hand, gathering information at the beginning of the school year means that the data will be connected to recent or current behavior, which increases its relevance to program content. Of course, other options (such as testing in January) and combinations are possible.

Another consideration is whether tests should be given on one day, or spread out over a period of time. Students taking a battery of tests may tire after some time and obtain lower scores. On the other hand, local schedules and availability of testing sites may allow for only one day of testing. In Indiana, these choices are left to the individual school corporations.

DATA ANALYSIS, PLACEMENT DECISIONS AND NOTIFICATIONS

After all data have been collected on the nominated students, it may be useful for the program coordinator to make a file folder for each student which contains all scores, correspondence and placement decisions for that student. It is also useful to have a master list of all students with their test scores, composite indexes (if matrices or T-Scores are used) and placement decisions. The selection committee analyzes the data and decides which students' needs may be met best by the program. It is desirable for this process to occur as soon as possible after all information has been gathered on the students.

In looking at the data, the selection committee occasionally may encounter a student whose scores appear to be at odds with what is known about the student. It is permissible to question a student's score. A score may be either too low or too high. An unlimited number of factors (e.g., test anxiety, fatigue, clerical errors and cultural mismatch) may contribute to poor performance on a test. A very limited number of factors, such as inappropriate teacher prompting, excessive time limits and student cheating, may inflate scores. It is, therefore, more appropriate to question scores that appear to be too low than those that appear to be too high. In some cases it may be desirable to obtain further information about a particular student, in order to evaluate fully his/her needs and abilities. For example, it is permissible to go back to the person who completed informal measures in order to get more complete information. The more complete the information, the more accurate the decision.

After the notifications have been sent, students should have the opportunity to appeal the placement decisions. The review committee handles this process. It is important that all nominated students, their parents and teachers be aware of the procedures for appeals. Many school districts require students to submit additional data to support their claim, and some require that the appealing students (or their parents) pay any of the costs involved in the testing and reviewing process. Although this procedure saves money for the corporation, it may have the effect of discouraging economically deprived students from appealing.

The records of all students should be reviewed every year. Because the educational needs of a student will vary from year to year, some students may not need the extra services one year but may need them the next. It may not be necessary to give a full battery of tests every year to students who previously have been selected for the program, but their records at least should be reviewed annually. All students should be given equal opportunity to be included in the nomination and appeal processes every year, whether or not they were included previously.

Occasionally a student in the program will not meet the expectations of the gifted/talented teacher. This may occur for many reasons: the student's ability is too low for the program; the student is not motivated to do the required work; the student is not socially, emotionally or physically ready for the program; the teacher is biased against the student; the teacher's expectations are too high; or the student's abilities are so high that he/she is still bored with the curriculum. Once students have been placed in a gifted/talented program, they should be allowed to exit if the program does not meet their educational (or other) needs. This is usually not a problem, especially if the school has a written policy for dealing with such situations.❑

Chapter 9

Evaluation of the Identification Process

According to Indiana Rule 511 IAC 6-9-7:

(a) Every program shall establish a procedure for evaluating its effectiveness. The evaluation must be both summative and formative. The program must solicit evaluation input from administrators, teachers, counselors, parents, students and community members.

(b) The evaluation must identify program strengths and weaknesses in the following areas:
(1) student progress;
(2) program design;
(3) student needs;
(4) learning environment;
(5) program goals and curriculum;
(6) student identification;
(7) personnel qualifications;
(8) resources;
(9) staff and community awareness; and
(10) cost effectiveness.

Further, 511 IAC 6-9-8A specifies that:

A review committee shall:
(a) hear student identification, placement and removal appeals; and
(b) annually review identification, placement and removal procedures.

This chapter will detail some ways in which the review committee can evaluate the program's identification, placement and removal procedures. Although in general the methods discussed relate to summative evaluation, many of them may also be applied to formative evaluation. Formative evaluation was discussed specifically in Chapter 3.

PURPOSES OF EVALUATION

Regardless of what is being evaluated, there are several purposes of evaluation. They are to:

- document success,
- document improvements,
- identify strengths,
- identify weaknesses,
- provide continuous feedback,
- provide data for revisions,
- explain program results, and
- inform uninformed audiences.

There are several alternatives open to review committees when planning for the evaluation procedure. The evaluation may be conducted by an outside evaluator, or the coordinator may decide to direct or conduct the evaluation alone or with the help of the BBPC. Local circumstances will dictate which alternative is most appropriate.

Outside Evaluator

The first item to consider when planning an evaluation is time. If time is limited but extra money is available, one option is to have an outside expert evaluate the identification procedures. G/T Cadre, a group of technical assistants, is one source for obtaining outside experts. Booklets listing the technical assistants are available through the Indiana Department of Education. Many universities also have experts in evaluation of educational programs, although it is helpful if they also have knowledge of identification procedures for gifted/talented students.

After the evaluator has been selected, schedule a meeting for planning and discussion. Be prepared to discuss your expectations, program description, student body description, identification procedures, budget for evaluation, etc. At that meeting, provide the evaluator with a copy of any program brochures, formal and informal identification instruments and any other relevant items. If there have been any previous evaluations of the identification system, a copy of these reports will be helpful to the evaluator. At the end of this meeting, all participants should have a clear understanding of the agreed-upon plan for evaluation. Depending on the available time, the evaluator may be able to complete the remaining portions of the review (such as interviews with teachers and students) during one day, or several days may be required.

Coordinator as Evaluator

The other option is for the program coordinator to conduct or direct the evaluation. In some cases the coordinator may assume the responsibility for doing most of the work; in other cases some of the responsibilities may be assumed by an evaluation committee or the review committee itself.

EVALUATING THE IDENTIFICATION PROCESS

Table 11 on page 130 identifies some possible questions to ask in an evaluation ("Why"), techniques to assess those questions ("How") and hypothetical methods of utilizing the information from the evaluation ("Use"). It is not necessary that each question be addressed each year, but Indiana regulations (511 IAC 6-9-8) require the broad areas of identification, placement and removal policies to be addressed annually in some way. Each of these three areas is presented separately in Table 11. The suggestions in Table 11 are not meant to offer all of the possible evaluation questions, techniques or uses. Rather, the table presents a broad range of options; other alternatives are available. The possibilities are limited only by the resources and creativity of those planning the evaluation.

SUMMARIZING THE EVALUATION

After collecting the data from any of the described evaluation techniques, the coordinator or review committee should analyze and interpret the data. To do this, the coordinator must be certain that the data collected were the data sought. If, after analyzing the data, there appear to be unanswered questions, use these questions to guide the next evaluation procedure.

The coordinator should share the general findings of the evaluation with the school board, the superintendent, principals, teachers and other interested parties.

In writing the evaluation report, remember who the audience will be and write in a manner appropriate to that audience. Relevant charts and graphs can help to clarify major points and should be included in the report. Recommendations for change should be supported by the data and by the goals set for the identification process. Evaluation results may be used to validate the current identification procedures, as well as to suggest changes. All of these report procedures will enable the coordinator to develop a sequential pattern for the concerns to be evaluated the following year.

The final pages of this chapter contain some sample forms which may be used or adapted for evaluation purposes.❑

Table 11. Evaluating the Identification Process

	Why	How	Use
Identification Procedures	Did the nomination and screening procedures allow equal opportunity for all students?	Tabulate demographic data on race, SES, gender, handicaps, etc. for the corporation, and compare to similar statistics for nominated and selected students.	Modify inservice activities to help staff learn characteristics of underserved students. ***or*** Change criterion level required for nomination or screening. ***or*** Change nomination or screening instruments.
	Were a sufficient variety of instruments included in the nomination and screening procedures?	Review the balance of instruments (formal and informal) and information sources (teachers, parents, students, peers, etc.) used for nomination and screening.	Modify nomination process by including self-nominations for secondary students.
	Were one or two instruments weighted too heavily in the decision-making process?	Tabulate data in different ways (e.g., different weights, T-Scores, profiles) and analyze whether the results are the same or different.	Adapt matrix to put heaviest weighting on teacher ratings. ***or*** Change from using student profiles to T-Scores.
	Was the information collected relevant to student success in the program?	Interview teachers and parents to collect their perception of the match between obtained information and student performance. Review identification procedures to determine match between instruments and program content.	Adapt some questions on the parent rating scale. Drop intelligence measure used for nomination to fine arts program, and add portfolio review.
	Do the procedures meet state guidelines?	Draw a chart to determine the match between local procedures and corresponding state requirements.	Modify local procedures to include standardized instruments.
	Were the procedures efficient? Were teachers able to complete the rating scales successfully?	Conduct an informal discussion with teachers and principals to collect their perceptions.	Adapt inservice procedures to train teachers on use of rating scales. ***or*** Congratulate teachers on their ability to use rating scales successfully!

Table 11. Continued

	Why	How	Use
Placement Procedures	Did the identification process result in appropriate placements to meet the educational needs of students?	Develop profile case studies of a few nominated students, some of whom were placed in the program and some of whom were not. Chart their progress for one to three years and analyze the results.	Conduct selection process annually for all students so that if they do not need services one year they may still receive services in another year.
	Were the "right" students placed in the program?	Interview or survey teachers and students to determine if they perceive large numbers of students who should have been included but weren't, or who should not have been included but were. Examine outcomes and performances in competitions and extra-curricular activities to see if a large number of those who do well were placed in the gifted/talented program.	Change screening criteria to more adequately select underachieving gifted students. ***or*** Include contest or extracurricular performance as part of the identification measures.
	Are parents of selected students sufficiently informed about the selection procedures?	Conduct a telephone survey of parents of children in the program to determine if they understand the selection procedures.	Hold a meeting for parents to inform them about the selection procedures and the program itself.
	Are some students being placed in the program simply to "fill up space?"	Interview g/t teacher to find out if his/her expectations for student performance had to be lowered to accommodate the lower ability of several students in the class.	Modify placement procedures to ensure that the students placed in the program are the students who need it.

Table 11. Continued

	Why	How	Use
Review Procedures	Do appeal, review and exit procedures exist? Does a review committee exist?	Review corporation's written policy to ensure that the review procedures and committee exist.	Write a policy regarding methods for appeals.
	Are parents, principals, teachers and students aware of the appeal, review and exit procedures?	Conduct a survey to determine perceptions and awareness of review and removal procedures.	Publish a brochure describing the identification, placement, review and removal processes.
	Are students able to be identified via a review in the middle of the school year?	Review written procedures to see if students who move into the corporation during mid-year may be considered for the program.	Develop a policy for reviewing records of new students.
	Are most appeals accepted or rejected? Are there patterns common to selected or unselected appeal cases?	Examine logs to determine numbers of successful and unsuccessful appeals. Analyze profiles of each group to find patterns common to those selected and not selected for the program.	Inservice review committee on characteristics of minority gifted children. ***or*** Commend review committee for its objectivity!
	Are students given a sufficient chance to "prove themselves" before being removed from the program?	Examine records and conduct interviews with teachers, parents and students to analyze the adequacy of removal and exit procedures.	Commend teachers, principals and counselors for their efforts in providing assistance to borderline students!

Sample 29. Local School District Demographic Data

Total Student Population: ____
Elementary: ____
Middle/Jr. High: ____
Sr. High: ____

G/T Students Being Served: ____
Elementary: ____
Middle/Jr. High: ____
Sr. High: ____

RACIAL BREAKDOWN (By Percentage):

	Total Population			G/T Population		
	Ele	MS	HS	Ele	MS	HS
White						
Black						
Hispanic						
Other						

GENDER BREAKDOWN (By Percentage):

	Total Population			G/T Population		
	Ele	MS	HS	Ele	MS	HS
Male						
Female						

FINANCIAL ASSISTANCE BREAKDOWN (By Percentage):

	Total Population			G/T Population		
	Ele	MS	HS	Ele	MS	HS
Receiving						

DISABLED BREAKDOWN (By Percentage):

	Total Population			G/T Population		
	Ele	MS	HS	Ele	MS	HS
LD						
Vis Impd						
Hrng Impd						
Phys Impd						

Sample 30. Informal Assessment of Identification Procedures

1. Do our current procedures utilize both formal and informal data? ..... Yes No

   Comments: _____

2. Are our current procedures consistent for all students? ..... Yes No

   Comments: _____

3. Are our current checklists appropriate and efficient? ..... Yes No

   Comments: _____

4. Are the right students being identified? ..... Yes No

   Comments: _____

5. Are we meeting the state guidelines? ..... Yes No

   Comments: _____

6. Do we have appeal/review procedures in place? ..... Yes No

   Comments: _____

7. Do we have consistent exit procedures in place? ..... Yes No

   Comments: _____

8. Do we have a clearly stated program description? ..... Yes No

   Comments: _____

9. Suggestions for change or improvements: _____

   _____

Sample 31. Evaluation of the Identification Procedures

PART I: PERSONAL DATA

The person completing this form is a:

___central office ___counselor
___administrator ___parent
___principal ___student
___teacher: ___other:
_____ _____

Number of years in this school corporation:

___0 - 1 year ___11 - 15 years
___2 - 5 years ___16 - 20 years
___6 - 10 years ___20+ years

Number of times you have participated in the g/t student identification process:

___1 time ___4 times
___2 times ___5+ times
___3 times

Number of gifted education courses you have completed:

___0 courses ___2 - 3 courses
___1 course ___4+ courses
___completed endorsement

Do you plan to take a course(s) in gifted education in the future? ..... Yes No

PART II: REACTION TO G/T IDENTIFICATION PROCEDURES

Please indicate your reactions to the process of identifying gifted/talented students in this school corporation. Use the following rating scale:

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

I am confident that this process correctly identified the gifted students in my classroom.

1 2 3 4 5

I believe that this process failed to identify gifted students who are in my classroom.

1 2 3 4 5

Sample 31. Continued

PART II cont.

Each year the g/t identification procedures have become more accurate at matching student needs with program services.

1 2 3 4 5

It has become easier for me to provide accurate information each year.

1 2 3 4 5

I believe the g/t identification procedures have become better organized each year.

1 2 3 4 5

The g/t identification procedures have become less time- consuming each year.

1 2 3 4 5

I spend too much time providing the information required for identification of gifted/talented students.

1 2 3 4 5

The effort required in the identification process is minimal for me, considering the benefits of the services for the children.

1 2 3 4 5

I believe the following components of the identification process are helpful in accurately identifying students who need the services being offered:

Teacher Rating Scales

1 2 3 4 5

Peer Nominations

1 2 3 4 5

ISTEP Scores

1 2 3 4 5

Parent Checklists

1 2 3 4 5

Sample 31. Continued

PART II cont.

Product Reviews	1	2	3	4	5
Auditions	1	2	3	4	5
Student Grades	1	2	3	4	5
Weighting of Test Scores	1	2	3	4	5
Screening Process Timeline	1	2	3	4	5
Order of Identification Procedures	1	2	3	4	5

Additional comments or suggestions: _____

_____

_____

_____

_____

Chapter 10

Putting It All Together

The purpose of the ID Guide is to provide a process for the identification of students to be placed in a gifted/talented program. It is written to help educators comply with the Indiana guidelines (511 IAC 6-9) for the identification of gifted/talented children.

The ID Guide presents a step-by-step description of both the planning of the identification process and the actual selection of students. The major steps involved in planning are *preparation, selection of instruments and procedures* and *inservice of staff*. Once planning is completed, educators may proceed with the actual *selection of students* and *summative evaluation* of the procedures. These steps are depicted in Table 2 on page 3.

To help educators implement the suggestions contained in the ID Guide, a planning form is presented in Sample 32 on the following page. This form is presented in the same step-by-step format previously described. It is hoped that this form, as well as the entire ID Guide, will be useful to educators in their efforts to identify and provide quality services to gifted/talented children.❑

Sample 32. Planning Form for Gifted/Talented Identification Procedures

Step	Activity	Timeline	Person Responsible
A. PREPARATION			
Selection of BBPC			
Determination of Program Philosophy and Options			
Determination of Committees			
Planning and Implementation of Formative Evaluation			
Planning of Summative Evaluation			
B. SELECTION OF INSTRUMENTS AND PROCEDURES			
Selection of Instruments			
Determination of Procedures for: ■ Nomination ▼ Secondary Screening ● Data Analysis ➨ Placement and Notification ✔ Appeals and Reviews ☆ Exits and Removals			
Continuation of Formative Evaluation			

Sample 32. Continued

Step	Activity	Timeline	Person Responsible
C. INSERVICE OF STAFF			
Planning and Implementation of Inservice			
Continuation of Formative Evaluation			
D. SELECTION OF STUDENTS			
Implementation of: ■ Nomination of Pool ▼ Secondary Screening ● Data Analysis ➨ Placement Decisions and Notifications ✔ Appeals and Reviews ☆ Exits and Removals			
Continuation of Formative Evaluation			
E. SUMMATIVE EVALUATION			
Implementation of Summative Evaluation			
Modification of Procedures Based on Evaluation Results			
Writing of Report Based on Evaluation Results			

Appendix A

Formal Measures

Appendix A contains an annotated list of formal identification instruments, including the reported usage of each in Indiana.

FORMAL MEASURES

KEY

 # = Number of corporations reporting usage in 1989-90 grant proposals

Levels Tested
P = Primary
I = Intermediate
M = Middle/Jr High School
H = High School

Focus of Test
I = Intellectual
A = Academic
C = Creativity
L = Leadership
V = Visual Arts
P = Performing Arts
O = Other

Content Areas
L = Language Arts
S = Social Studies
M = Mathematics
Sc = Science

Administration
G = Group Measure
I = Individual Measure

SIS Availability
B = Ball State
I = IUPUI
P = Purdue
W = Wilson Ed Center

Name of Instrument	#	Levels	Focus	Content	Admin	SIS
Academic Promise Tests	0	IMH	A	LM	G	B
Alternative Uses, Form B&C	0	PIM	C	—	G	B
Arlin Test of Formal Reasoning	1	MH	I	—	G	IPW
Blind Learning Aptitude Test	0	PIMH	I	—	I	—
California Achievement Test	245	PIMH	A	LM	G	—
Cartoon Conservation Scales	0	PI	I	—	GI	—
Cattell Culture Fair Intelligence Series	0	PIMH	I	—	G	—
Christensen-Guilford Fluency Tests	0	H	C	—	GI	B
CIRCUS	0	P	I	—	GI	—
Cognitive Abilities Test	7	PIMH	I	—	G	BP
College Board Achievement Tests	0	H	A	LSMSc	G	—
Columbia Mental Maturity Scale	0	PIMH	I	—	I	—
Comprehensive Tests of Basic Skills	0	PIMH	A	LSMSc	G	—
Comprehensive Tests of Basic Skills Readiness Test	0	PIMH	A	LSMSc	G	B
Cornell Critical Thinking Tests	0	IM	I	—	G	BIPW

Name of Instrument	#	Levels	Focus	Content	Admin	SIS
Creativity Assessment Packet	3	IMH	C	—	G	PI
Developing Cognitive Abilities Test	21	MH	I	—	G	BI
Differential Aptitude Tests	0	MH	O	LMO	G	BP
Gordon's Musical Aptitude Profile	0	IMH	P	music	I	—
Graves Design Judgment Test	0	MH	V	art	G	—
Gross Geometric Forms: Creativity Test for Children	0	PI	C	—	I	B
Group Inventory for Finding Creative Talent	1	PI	C	—	G	I
Guilford's Creativity Tests for Children	0	PI	C	—	G	B
Henmon-Nelson Tests of Mental Ability	0	P	I	—	G	B
Horn Art Aptitude Inventory	0	H	V	art	G	BIP
Indiana Statewide Testing for Educational Progress	245	PIMH	A	LSMSc	G	—
Intermediate Measure of Music Audiation	0	PI	P	music	I	—
Iowa Tests of Basic Skills	9	PIMH	A	LSM	G	—
Kaufman Assessment Battery for Children	0	PI	I	—	I	—
Kaufman Test of Educational Achievement	0	PIMH	A	LM	I	B
Khatena-Torrance Creative Perception Inventory	0	MH	C	—	G	BIP
Kuhlmann-Anderson Tests	1	PIMH	A	LM	I	I
Lambert,Hartsough,BowerTest	0	PIM	I	—	GI	B
Leiter International Performance Scale	0	PIMH	I	—	I	—
Lorge-Thorndike Intelligence Test	0	PIMH	I	—	I	—
Matrix Analogies Test	0	PIMH	I	—	G	BI
McCarthy Scales of Children's Abilities	0	PI	I	—	I	—
Meier Art Judgement Tests	0	MH	V	art	I	BIW
Metropolitan Achievement Tests	1	IMH	A	LSMSc	G	—
MUFFS: Peer Identification Instrument	0	PI	L	—	G	BP
Music Achievement Test	0	PIMH	P	music	GI	—
Musical Aptitude Profile	0	IMH	P	music	I	B
Orleans-Hanna Algebra Prognosis Test	1	MH	A	M	G	—
Otis-Lennon School Ability Test	33	PIMH	I	—	G	BI
Peabody Individual Achievement Test	0	PIMH	A	LM	I	—
Peabody Picture Vocabulary Test-Revised	0	PI	I	—	I	—

Name of Instrument	#	Levels	Focus	Content	Admin	SIS
Preschool and Kindergarten Interest Descriptor	0	P	C	—	I	—
Primary Measure of Music Audiation	0	P	P	music	GI	B
Ravens Advanced Progressive Matrices	0	IMH	I	—	I	—
Ravens Progressive Matrices	3	IMH	I	—	I	BP
Reach Tests, Forms A & B	0	PI	I	—	G	B
Ross Test of Higher Cognitive Processes	1	I	I	—	G	BIPW
Scholastic Aptitude Test	0	MH	A	LM	G	—
Screening Assessment for Gifted Elem Students	5	PI	I	—	I	BIPW
Seashore Measures of Musical Talents	0	IMH	P	music	GI	—
Sequential Tests of Educational Progress	0	IMH	A	LSMSc	G	—
Short Form Test of Academic Aptitude	0	PIMH	I	—	G	—
Slosson Intelligence Test	9	PIMH	I	—	G	BIPW
SRA Achievement Series	0	PIMH	A	LSMSc	G	—
Stanford Achievement Test	0	PIMH	A	LSMSc	G	—
Stanford-Binet Intelligence Scale	4	PIMH	I	—	I	—
Structure of Intellect-Gifted Screening Form	0	PIMH	I	—	G	—
Structure of Intellect-Learning Abilities Test	3	PIMH	I	—	G	—
System of Multicultural Pluralistic Assessment	0	PI	I	—	I	P
Test of Early Mathematics Ability	0	P	A	M	I	BIP
Test of Early Reading Ability-2	0	PI	A	L	I	I
Tests of Achievement and Proficiency	0	H	A	LSMSc	G	P
Tests of Cognitive Skills	0	PIMH	I	—	G	—
Thinking Creatively in Action and Movement	0	P	C	—	I	IPW
Thinking Creatively with Sounds and Words	0	PIMH	C	—	I	IPW
Torrance Tests of Creative Thinking	3	PIMH	C	—	GI	BIPW
Watson-Glaser Critical Thinking Appraisal	0	H	I	—	G	BPW
Wechsler Adult Intelligence Scale-Revised	0	H	I	—	I	—
Wechsler Intelligence Scale for Children-Revised	4	PIMH	I	—	I	—
Wechsler Preschool and Primary Scale of Intelligence	0	P	I	—	I	—
Wide Range Achievement Test	1	PIMH	A	LM	I	IPW
Woodcock-Johnson Psycho-Educational Battery	2	PIMH	I	—	I	—

Appendix B

Informal Measures

Appendix B contains a list of published informal instruments and samples of unpublished informal measures. Permission is granted to reproduce or alter any of the samples. All samples were obtained or adapted from those used in gifted programs in Indiana unless otherwise indicated.

INFORMAL MEASURES

KEY

\# = Number of corporations reporting usage in 1989-90 grant proposals

Levels Tested
P = Primary
I = Intermediate
M = Middle/Jr High School
H = High School

Focus of Test
I = Intellectual
A = Academic
C = Creativity
L = Leadership
V = Visual Arts
P = Performing Arts
O = Other

Content Areas
L = Language Arts
S = Social Studies
M = Mathematics
Sc = Science

Administration
G = Group Measure
I = Individual Measure

SIS Availability
B = Ball State
I = IUPUI
P = Purdue
W = Wilson Ed Center

Name of Instrument	#	Levels	Focus	Content	Admin	SIS
A Survey of Students' Educational Talents and Skills	0	PI	ICVP	—	GI	I
Abstract Reasoning Indicator	0	IMH	I	—	GI	I
Achievement Identification Measure	0	PIMH	O	—	I	IPW
Achievement Identification Measure-Teacher Obs.	0	PIMH	O	—	I	I
Biographical Inventory Form	0	IMH	IAVL	—	GI	BP
Checklist of Creative Positives (Torrance)	0	PIMH	C	—	I	—
Clark's Drawing Abilities Test	0	IMH	V	art	G	—
Creativity Attitude Survey	0	I	C	—	G	B
Creativity Checklist	0	PIMH	C	—	G	BI
DeHaan Checklists for Identifying Children Who are Gifted, Creative or Talented	0	PIMH	ACLVP	LSc art music drama	I	—
Early Identification Screening Program	0	P	I	—	I	B
Early Screening Inventory	0	P	I	—	I	W
Eby Elementary Identification Instrument	1	PIM	IC	—	I	IP

Name of Instrument	#	Levels	Focus	Content	Admin	SIS
Ennis-Weir Critical Thinking Essay Test	0	MH	I	—	G	BIPW
Fisher Comprehensive Assessment of Giftedness Scale	0	IMH	O	—	I	I
Gifted Student Screening Scale	0	PIMH	IC	—	I	W
Gifted and Talented Screening Form	0	PIM	all	—	I	BI
Group Achievement Identification Measure	0	IMH	O	—	G	I
Indiana Musicality Audition	0	PIMH	V	art	G	—
Leadership Skills Inventory	0	IMH	L	—	I	BIW
Preschool Talent Checklists	0	P	all	—	I	P
Purdue Academic (Secondary) Rating Scales	0	MH	A	LSMSc	I	—
Purdue Elementary Problem Solving Inventory	0	PI	I	—	GI	B
Purdue Vocational Talent Scales	0	MH	O	vocatns	I	—
Renzulli Scales for Rating the Behavioral Characteristics of Superior Students	42	PIMH	all	—	I	BIPW
Scales of Creativity and Learning Environment	0	PIMH	I	—	I	—
Silverman-Waters Parent Checklist	0	PIMH	I	—	I	IW
Simons Measurements of Music Listening Skills	0	P	P	music	G	—
Stallings Environmentally Based Screen	0	P	I	—	I	—
Vallett Inventory of Critical Thinking Abilities	0	PI	I	—	I	IW
Wallach-Kroger Creativity Instrument	0	H	I	—	I	P

Sample 33. Teacher Rating Scale 1

Student Name: _____ Age: _____

School: _____ Grade: _____

Teacher: _____ Date: _____

Please rate the student on the following characteristics by circling the appropriate number, using the following criteria:

1 Seldom or never observe this characteristic
2 Occasionally observe this characteristic
3 Frequently observe this characteristic
4 Almost always observe this characteristic

CHARACTERISTICS				
1. Has unusually good vocabulary	1	2	3	4
2. Has ideas which are often very original and imaginative in one or more areas	1	2	3	4
3. Has an unusually good memory	1	2	3	4
4. Is alert and keenly observant; responds quickly	1	2	3	4
5. Has a long attention span	1	2	3	4
6. Uses longer sentences than peers	1	2	3	4
7. Reasons things out; thinks clearly; recognizes relationships; comprehends meanings	1	2	3	4
8. Is curious about places outside immediate environment	1	2	3	4
9. Is informed about a variety of areas	1	2	3	4
10. Shows a high level of sensitivity and empathy	1	2	3	4
11. Has an excellent sense of humor	1	2	3	4
12. Is an independent worker	1	2	3	4
13. Has a variety of interests	1	2	3	4
14. Is a leader in several kinds of activities; is able to influence others to work toward desirable goals	1	2	3	4
15. Has outstanding talent in a special area (indicate area: _____)	1	2	3	4

I consider this student, as a candidate for a gifted/talented program, to be:
____Superior ____Very Good ____Average ____Below Average

Comments: _____

_____

Sample 34. Teacher Rating Scale 2: Drama

Directions: The following students have indicated their interest in the Children's Theater program. We would appreciate your input regarding their creative and dramatic abilities. Use the key below in determining the rating for each item.

A = Superior ability/attitude
B = Above average ability/attitude
C = Average ability/attitude
D = Below average ability/attitude

	STUDENT NAMES							
Displays much curiosity								
Generates many unique ideas and solutions								
Enjoys participating in class skits or plays								
Can easily tell a story or share experiences								
Holds the attention of the group when speaking								
Uses gestures and facial expression to show feelings								
Can imitate others, mimicking speech, walk, etc.								
Is uninhibited in expressing ideas and opinions								
Shows sensitivity, identifies with the moods of others								
Accepts suggestions and criticisms positively								

Sample 35. Teacher Rating Scale 3: Visual Arts

Name of Student:_____ Grade:_____

School:_____ Teacher:_____

	Seldom	Occasionally	Frequently	Always
Is more apt to respond to artistic peer and adult role models				
Possesses a well developed visual memory				
Has a high curiosity level that stimulates active imagination				
Is more apt to respond to environmental observations and changes				
Is capable of original thinking				
Has the ability to generalize				
Examines problems critically				
Is able to concentrate for long periods of time				
Seeks challenging experiences that are goal-oriented				
Engages in compulsive pursuit of special interests				
Imposes self-criticism that interferes with task satisfaction				
Column Total	____	____	____	____
Weight	1	2	3	4
Weighted Column Total	____	____	____	____
OVERALL TOTAL	_____			

Sample 36. Teacher Rating Scale 4: Underserved Students

Name of Student:_____ Grade:_____

School:_____ Teacher:_____

Course (Secondary):_____

I. EVIDENCE OF POSSIBLE GIFTEDNESS

Please indicate the degree to which the pupil exhibits the following characteristics. Mark only those characteristics that have been observed.

	1 Slight	2 Moderate	3 Marked
1. Takes initiative and shows independence of action	_____	_____	_____
2. Shows leadership ability	_____	_____	_____
3. Shows adaptive social reasoning and/or behavior	_____	_____	_____
4. Is alert, observant, curious	_____	_____	_____
5. Shows motivation and drive, enjoys challenges	_____	_____	_____
6. Learns easily through experience	_____	_____	_____
7. Retains and uses ideas	_____	_____	_____
8. Can transfer learning from one situation to another	_____	_____	_____
9. Demonstrates fluency in verbal expression	_____	_____	_____
10. Has a fund of information and range of vocabulary	_____	_____	_____
11. Has varied interests	_____	_____	_____
12. Shows imagination, originality and creativity	_____	_____	_____
13. Is flexible and resourceful in problem solving	_____	_____	_____
14. Demonstrates abstract thinking ability	_____	_____	_____

Sample 36. Continued

	1 Slight	2 Moderate	3 Marked
15. Has a good sense of humor	_____	_____	_____
16. Demonstrates persistence in tasks	_____	_____	_____
17. Shows facility in learning English, if bilingual	_____	_____	_____

Other evidence of giftedness (i.e., art, music, drama or mechanical abilities):_____

II. EVIDENCE OF UNDERACHIEVEMENT

Please check the factors below that give evidence of the student's underachievement.

_____ Teacher observation and evaluation of student's daily work reveals a relative lack of quality and depth.

_____ Report card marks and cumulative records show a pattern of inconsistent achievement.

_____ Parents express opinions that the student is not achieving to his/her full potential.

_____ Student expresses a desire to achieve at a higher level in academic areas.

_____ Standardized test data listed below show a discrepancy between the student's potential and achievement:
Achievement Test Scores:_____
Intelligence Test Scores:_____

III. EVIDENCE OF HANDICAP

Please check all factors below that apply to the student.

Environmental Handicaps
- ____ Limited experiential background
- ____ Irregular attendance
- ____ At least 3 moves in elementary years
- ____ Limited enrichment opportunity in home
- ____ Home responsibilities interfering with learning

Sample 36. Continued

Language Handicaps
- _____ Lack of proficiency in any language
- _____ Limited opportunity to acquire depth in English
- _____ Nonstandard English interfering with learning

Cultural Handicaps
- _____ Limited experiences in dominant culture
- _____ Few experiences in any culture which stimulate intellectual growth
- _____ Subculture standards in conflict with dominant culture standards

Economic Handicaps
- _____ Residence in a depressed economic area
- _____ Low family income at a subsistence level
- _____ Necessary student employment interfering with learning
- _____ Family unable to afford enrichment materials and experiences

Disabilities
- _____ Blind or vision impaired
- _____ Deaf or hearing impaired
- _____ Learning disabled
- _____ Physically handicapped:_____

Sample 37. Parent Rating Scale 1

Student Name:_____ Grade:_____

School:_____ Teacher:_____

In each of the three sections below, circle the number which indicates how often you observe the characteristics in the behavior of your child.

	0 Never	1 Seldom	2 Sometimes	3 Frequently
LEARNING CHARACTERISTICS				
• Advanced vocabulary	0	1	2	3
• Good memory	0	1	2	3
• Learns very quickly	0	1	2	3
• Seems to know many things	0	1	2	3
• Generalizes skillfully	0	1	2	3
• Understands concrete ideas	0	1	2	3
• Understands abstract ideas	0	1	2	3
• Can state similarities and differences in relationships	0	1	2	3
• Understands cause and effect	0	1	2	3
• Makes decisions easily	0	1	2	3
• Eager to learn new ideas	0	1	2	3
CREATIVITY CHARACTERISTICS				
• Questioning, very curious about many topics	0	1	2	3
• Has many ideas	0	1	2	3
• Sees things in many different ways	0	1	2	3
• Offers unique or unusual solutions	0	1	2	3
• Adds interesting details	0	1	2	3
• Transforms or combines ideas	0	1	2	3
• Sees implications or consequences easily	0	1	2	3
• Willing to take risks	0	1	2	3
• Comfortable with disagreements	0	1	2	3
• Appreciates subtle humor, paradox or discrepancies	0	1	2	3
MOTIVATION CHARACTERISTICS				
• Sets own goals, standards and plans	0	1	2	3
• Intense involvement in preferred tasks	0	1	2	3
• Enthusiastic about interests and activities	0	1	2	3
• Needs little external motivation when pursuing preferred tasks	0	1	2	3
• Prefers to concentrate on preferred tasks	0	1	2	3
• High level of energy	0	1	2	3
• Does not give up easily	0	1	2	3
• Completes projects	0	1	2	3
• Eager for new challenges	0	1	2	3
• Assumes responsibility	0	1	2	3

Parent Signature: _____ Date: _____

(Adapted by Kay W. Kelly from the Renzulli Scales)

Sample 38. Parent Rating Scale 2

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Please rate the following items as each best describes your child as you see him/her. Use the following rating scale:

	1 Seldom or Never	2 Occasionally	3 Regularly	4 Frequently	5 Almost Always
Is alert beyond his/her years	1	2	3	4	5
Has interests of older children in games and reading	1	2	3	4	5
Sticks to a project once started	1	2	3	4	5
Is observant	1	2	3	4	5
Has lots of ideas to share	1	2	3	4	5
Has many different ways of solving problems	1	2	3	4	5
Is aware of problems others often do not see	1	2	3	4	5
Uses unique and unusual ways of solving problems	1	2	3	4	5
Wants to know how and why	1	2	3	4	5
Likes to pretend	1	2	3	4	5
Asks a lot of questions about a variety of subjects	1	2	3	4	5
Is not concerned with details	1	2	3	4	5
Notices beautiful things	1	2	3	4	5
Is able to plan and organize activities	1	2	3	4	5
Often finds own mistakes	1	2	3	4	5
Often corrects own mistakes	1	2	3	4	5
Makes up stories that show unique ideas	1	2	3	4	5
Has a wide range of interests	1	2	3	4	5
Gets other children to do what he/she wants	1	2	3	4	5
Sets high standards for self	1	2	3	4	5
Chooses difficult problems over simple ones	1	2	3	4	5
Is able to laugh at self	1	2	3	4	5

Sample 39. Parent Rating Scale 3: Visual Arts

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Parent Name:_____ Date:_____

The Art Department is attempting to identify students with special ability in art. As a parent, you have knowledge that would be helpful to the school in this selection process. All information will be held in the strictest confidence. Please check the column that most aptly describes your child.

	Almost Always	Often	Occasionally	Don't Know
Draws, paints or works with other art materials at home	____	____	____	____
Expresses a desire to visit museums, exhibitions, etc.	____	____	____	____
Is curious about people, things and events around him/her	____	____	____	____
Expresses opinion about decorations in and around the home	____	____	____	____
Is asked by others to do art work	____	____	____	____
Takes pride in doing things well	____	____	____	____
Uses spending money to buy art supplies	____	____	____	____
Enjoys and appreciates the art of others	____	____	____	____
Comments on the colors, shapes and structure of things	____	____	____	____

(Source: Baltimore County Public Schools)

Sample 40. Parent Rating Scale 4: Music

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Please help us in planning appropriate musical instruction for your child by responding to the following questions about the kinds of activities he/she seems to enjoy.

PART I: GENERAL INTERESTS

Before each of the following statements, place the number that you feel most closely represents your observation of your child's interests and activities. Use the following scale:

1 I seldom or never observe this behavior.
2 I occasionally observe this behavior.
3 I observe this behavior about half of the time.
4 I frequently observe this behavior.
5 I almost always observe this behavior.

_____Sings spontaneously while working or playing

_____Chooses to listen to records or tapes over other free-time activities

_____Expresses specific preferences for certain types of music even to the point of objecting to others

_____Attempts to teach musical skills learned in school or in private lessons to younger brothers or sisters

_____Seems particularly sensitive to sounds of all kinds

_____Remembers and sings tunes from television programs and/or commercials

_____Is eager to perform for friends and relatives

_____Spontaneously dances, moves or creates rhythmic accompaniments (clapping, etc.) to music on TV or radio

_____Practices a musical instrument or singing daily

_____Practices a musical instrument longer than required by parents or teachers

_____Reads books about music and musicians

_____Creates his/her own songs

_____Creates musical compositions at the piano or other instrument

_____Shows an interest in learning to play the piano or other instrument

_____Sings folk songs, popular songs and rounds with other children

Sample 40. Continued

PART II: MUSICAL ACTIVITIES

A. Please list all of the organized musical activities such as piano lessons or church choir in which your child participates.

B. Please list some of the informal musical activities that happen in your family and indicate the degree to which your child participates.

PART III: ADDITIONAL COMMENTS

Please offer your own evaluation of your child's musical interests and abilities, as well as any other comments you would like to add.

Sample 41. Student Rating Scale

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Check the blank which most accurately describes how often you display each of the following:

	Seldom or Never	Sometimes	Frequently
I am curious about a great many things. I ask questions about anything and everything.	____	____	____
I have a large number of ideas or solutions to problems and often have unusual or way-out responses.	____	____	____
I am not afraid to express my opinions or disagree with someone.	____	____	____
I am not afraid to take a risk and I like adventure.	____	____	____
I like to imagine, to fantasize or to take an idea and change it in my mind.	____	____	____
I have a good sense of humor and see humor in things that others don't.	____	____	____
I am not afraid to show my emotions or act on what I think is right.	____	____	____
I enjoy beauty when others may not notice it.	____	____	____
I do not fear being different from others.	____	____	____
I criticize others only so that they might improve.	____	____	____

Sample 42. Peer Rating Scale: Visual Arts

Name:_____ Grade:_____ Age:_____

School:_____ Teacher:_____

Name of Student Nominated:_____

Read the following statements carefully. Put an "X" in the column that best describes the student you have nominated.

	Seldom	Occasionally	Frequently	Almost Always
Draws a lot in school	____	____	____	____
Does outstanding art work	____	____	____	____
Uses many different materials to do art work	____	____	____	____
Makes art outside of school	____	____	____	____
Enjoys talking about art	____	____	____	____
Has many original ideas about art	____	____	____	____

Additional comments:

_____

_____

(Source: Baltimore County Public Schools)

_____

Sample 43. Teacher Checklist 1

Student Name:_____ Grade:_____

School:_____ Teacher:_____

When compared to a typical sixth grade student:

	Social Studies		Science		Language Arts		Math	
Does the student demonstrate above average independent work habits?	Yes	No	Yes	No	Yes	No	Yes	No
Does the student independently explore areas of interest?	Yes	No	Yes	No	Yes	No	Yes	No
Is the student willing to try different methods of problem-solving?	Yes	No	Yes	No	Yes	No	Yes	No
Does the student demonstrate academic perseverance?	Yes	No	Yes	No	Yes	No	Yes	No
Does the student do academic work above grade level?	Yes	No	Yes	No	Yes	No	Yes	No
Should the student be placed in the AT classes at the junior high level?	Yes	No	Yes	No	Yes	No	Yes	No

To support these decisions I cite the following:
(suggestions: grades, questioning skills, special projects, creativity, etc.)

_____

_____

_____

Sample 44. Teacher Checklist 2

Teacher:_____ Grade/Subject:_____

School:_____ Date:_____

Please fill in the names of all of the students in your class at the top of the chart. Then put a check in the box for each student who has the characteristics indicated.

Characteristics	Student Names								
Has a long attention span									
Learns rapidly, easily and with little repetition									
Learned to read early and still reads at an advanced level									
Shows maturity in self-expression									
Attentive to the environment									
Asks questions and really wants to know causes and reasons									
Likes to study difficult subjects									
Recognizes relationships and comprehends meanings									
Shows a high degree of originality									
Possesses outstanding ability in one or more content areas									

Sample 45. Teacher Checklist 3: Visual Arts

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Check the statements that describe the student you are nominating:

WORK HABITS AND LEARNING ABILITIES

_____Shows insight; is observant
_____Masters basic art skills easily and quickly
_____Has a keen sense of humor
_____Takes pride in own art work
_____Works independently
_____Concentrates on art projects for long periods
_____Finishes art projects

ART KNOWLEDGE AND SKILLS

_____Is critical of own art work and work of others
_____Creates skillful, well-organized compositional arrangements
_____Uses different media effectively and confidently
_____Demonstrates elaboration and details in art work
_____Creates charts, graphs, models or other visuals to supplement work
_____Shows interest and knowledge about works of art from the past and present

DESIRE AND INTEREST

_____Spends a great deal of time, in and out of school, doing art work
_____Shows high desire for visually stimulating experiences
_____Is self-motivated to make art work
_____Demonstrates high desire to improve own art work

Additional Comments:

_____Shows exceptional art skills in: _____

_____Honors and awards nominee has received: _____

_____

_____Why do you think this student should be recommended for the Visual Arts Program?

_____

_____

(Source: Chesterfield (VA) County Public Schools and Tonawanda (NY) Union Free School Districts.)

_____

Sample 46. Teacher Checklist 4: Underachieving Students

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Please check the statements that describe the student you are nominating. This student:

_____ Demonstrates a significant difference between classroom performance and performance on achievement tests.

_____ Seems inattentive and bored with typical school requirements, but "comes alive" and demonstrates excellent comprehension and reasoning when special topics are raised.

_____ Is critical of conventional behavior.

_____ Has high absenteeism, but keeps up with grades despite missing much formal teaching.

_____ Is self-taught in some topics, which are usually not covered in school.

_____ Is one-sided about some subjects (has a deep interest to the exclusion of all else).

_____ Verbalizes with skill and insight on a wide range of topics, but avoids writing.

_____ Is a perfectionist to the degree that it interferes with the completion of assignments and, therefore, is viewed as low performance.

_____ Other relevant comments or explanation of answers above:

_____

_____

_____

Sample 47. Parent Checklist 1

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Instructions: Please indicate "yes" or "no" next to each item.

			Comments
Learns rapidly and easily	Yes	No	_____
Transfers knowledge from one situation to another	Yes	No	_____
Retains knowledge without rote drill	Yes	No	_____
Uses an extensive vocabulary	Yes	No	_____
Reads books that are above grade level	Yes	No	_____
Wants to know the causes or reasons for things	Yes	No	_____
Does academic work above grade level	Yes	No	_____
Understands abstract concepts	Yes	No	_____
Independently explores areas of interest	Yes	No	_____
Has perseverance	Yes	No	_____
Independently writes stories, poems or plays	Yes	No	_____
Willing to try different methods of problem solving	Yes	No	_____
Evaluates own work	Yes	No	_____
Creates new ideas through writing, speaking or playing	Yes	No	_____
Invents things on own	Yes	No	_____

Sample 48. Parent Checklist 2

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Name of Parent Completing Form:_____

The following list of characteristics represents traits generally found in academically talented students. Please complete this checklist for your child. If you feel your child excels in a particular area, please put two checks by the statement.

_____Uses large vocabulary easily and accurately

_____Is effective in spoken and/or written communication

_____Shows a wide range of interests, or a heavy concentration on one

_____Spends time beyond usual assignments on topics of personal interest

_____Performs above grade level in school work

_____Asks penetrating questions

_____Recognizes cause and effect relationships quickly

_____Is a good independent worker

_____Reasons things out, thinks clearly, recognizes relationships and comprehends meanings

_____Learns rapidly and easily

_____Has special interests, needs or hobbies which could be developed further within a special program

_____Demonstrates persistence in tasks

_____Has complex thoughts and ideas (uses higher level thinking skills)

_____Produces original or unusual products or ideas

On the back of this form please make any additional observations that you believe would indicate the need for enrichment for your child.

Sample 49. Student Checklist 1

Name:_____ Grade_____ Age:_____

School:_____ Teacher:_____

The following information will help us to know more about you so that we will be better able to plan your school year. Please help us by answering the following:

1. I write plays or stories on my own.	Yes	No
2. I like to know why things happen.	Yes	No
3. I draw better than most kids.	Yes	No
4. I am good at solving problems.	Yes	No
5. I do good work in science.	Yes	No
6. I read more than one book a week.	Yes	No
7. I do well in math.	Yes	No
8. Other students ask me for help.	Yes	No
9. I can answer my teachers' questions quickly.	Yes	No
10. I can work well on my own.	Yes	No
11. I try to do my best in school.	Yes	No
12. I like using new words when I talk.	Yes	No
13. I know a lot about different things.	Yes	No
14. Acting lets me show my feelings.	Yes	No
15. I play a musical instrument.	Yes	No
16. I like to finish things I start.	Yes	No
17. I use the dictionary.	Yes	No
18. I use the encyclopedia.	Yes	No
19. Schoolwork is easy for me.	Yes	No
20. I like to help other students.	Yes	No
21. I enjoy talking with teachers and other adults.	Yes	No

22. What do you like to collect? _____

_____

23. What do you enjoy doing when you are not in school? _____

_____

24. What kinds of books or magazines do you like to read? _____

_____

_____

Sample 50. Student Checklist 2: Visual Arts

Name:_____ Grade_____ Age:_____

School:_____ Teacher:_____

Please check the statements that best describe you.

_____1. My classmates consider me an artist.

_____2. My art work is among the best in my class.

_____3. I often do art work outside of school.

_____4. I doodle and scribble all the time.

_____5. I use art work to help explain my ideas.

_____6. I like to go to art museums.

_____7. I like to show my art work to others.

_____8. I enjoy television programs about art and artists.

_____9. I have done art work for my school plays, newspaper, etc.

_____10. I like to copy or draw cartoons.

(Source: Jersey City Public Schools, Rhode Island Department of Education and Baltimore County Public Schools.)

Sample 51. Teacher Nomination 1

Teacher's Name:_____ Grade/Subject:_____

School:_____ Date:_____

Please write a student's name for each of the following characteristics. You may name a student more than once.

_____ 1. Best student

_____ 2. Child with the largest vocabulary

_____ 3. Most creative and original child

_____ 4. Child with most leadership ability

_____ 5. Most scientifically oriented child

_____ 6. Child who does the best critical thinking

_____ 7. Able child who is the biggest nuisance

_____ 8. Most highly motivated child

_____ 9. Child other children like best

_____ 10. Child who is most advanced in academic areas

_____ 11. Brightest minority child in the class

_____ 12. Child whose parents are most concerned about increasing the enrichment of his/her educational program

Sample 52. Teacher Nomination 2

Teacher's Name:_____ Grade/Subject:_____

School:_____ Date:_____

I recommend that the following student be considered for the SPACE Program:

_____

What are the first words that come to your mind to describe this student? Why?

Which intellectual characteristics and abilities will you most remember about this student?

Which personal qualities stand out in the applicant? Are there any special strengths or weaknesses?

Please add any additional comments or information that you feel distinguishes this student.

Sample 53. Teacher Nomination 3: Forced Choice Procedure

Teacher's Name:_____ Grade/Subject:_____

School:_____ Date:_____

The students listed below have met one or more criteria for inclusion in the talent pool of nominees and will be considered for selection in the Academically Talented Program.

_____ _____

_____ _____

_____ _____

_____ _____

Please consider the remaining students in your class. Review the attached program description and then list the additional students whom you believe would benefit from this program. Include in your consideration students who fall into one or more of these categories:

a. academically able but underachieving
b. culturally different
c. economically deprived

_____ _____

_____ _____

_____ _____

Sample 54. Parent Nomination 1

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Parent Making Nomination:_____

NARRATIVE RECOMMENDATION

My child should/should not be placed in the A/T Program for the following reasons (suggestions to consider: questioning skill, interests, special projects, activities outside of school, etc.):

_____

_____

_____

_____

_____

Sample 55. Parent Nomination 2

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Parent Making Nomination:_____

1. What are some things about your child that lead you to believe that he/she should be in a special program for high ability students?

_____

_____

2. What problems, if any, is he/she having in school as a result of the high ability?

_____

_____

3. Describe briefly your child's reading habits, patterns and levels at home.

_____

_____

4. Describe briefly your child's major interests, hobbies, activities, etc.

_____

_____

5. Describe any projects or studies your child has done.

_____

_____

6. Please give any other information which you feel is relevant to your child's consideration for the Honors Program.

_____

_____

(Reprinted with permission from John Feldhusen, Purdue Univ.)

_____

Sample 56. Student Nomination 1

Name:_____ Grade:_____ Age:_____

School:_____ Teacher:_____

Check the subject area(s) in which you think you have special abilities or talents.

Reading _____

Mathematics _____

Science _____

Social Studies _____

Describe projects or activities with which you have been involved, stories you have written or prizes you have been awarded that further support the talent area(s) you marked above.

_____

_____

_____

_____

_____

Sample 57. Student Nomination 2

Name:_____ Grade:_____ Age:_____

School:_____ Teacher:_____

Class or classes in which I am interested in participating:

Math____ Science____ Social Studies____ English____

1. I believe I am qualified because:

2. I would benefit by being in this class because:

3. My major hobbies and interests are:

4. My special talents are:

5. Other information that is important about me:

Sample 58. Peer Nomination 1

Please write down the names of the classmate whom you would pick for the following:

1. Who seems to know the most about a lot of different things? _____
2. If you needed help in math, who would you ask? _____
3. If you were lost in a strange place, who would be best at figuring out what to do? _____
4. Who usually knows the meaning of a lot of big words? _____
5. Who knows the most about scientific things? _____
6. Who would you pick to work with on a social studies project? _____
7. Who should be class president because he or she usually gets everyone to work together and get things done? _____
8. Who would be best at reading an exciting mystery story to the class? _____
9. Who would you choose to represent your class in a debating competition? _____
10. Who in your class would you call your best friend? _____

Sample 59. Peer Nomination 2: Visual Arts

Write the names of your classmates who best fit the following questions:

1. Who spends the most time drawing in and out of art class? _____
2. Who would you pick to design a poster for the school play? _____
3. If you were assigned a group art project, who would you most like to have work with you? _____
4. Who thinks of the most unusual, fantastic or original ideas? _____
5. Who spends the most time working on their art projects? _____
6. Who sets the highest standards for his or her own art work? _____

(Source: Jersey City Public Schools)

Sample 60. Parent Biographical Information 1: K-1 Students

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Parent Making Nomination:_____

Please answer the following questions:

1. Does your child make up his/her own games, build unusual objects or tell imaginative stories? Example:
   _____

2. At what age did your child first walk?_____ talk?_____

3. Did your child read before entering kindergarten?_____ At what age?_____

4. Did your child teach him/herself to read?_____

5. What special talents or skills does your child have?
   _____
   _____

6. What types of hobbies or collections does your child have?
   _____
   _____

7. What are your child's reading interests? Include favorite books, types of books, magazines, etc.
   _____
   _____

8. What does your child enjoy doing when he/she has free time?
   _____
   _____

9. What is your child's attitude toward school?
   _____
   _____

10. What other information can you provide that would assist us in planning a program for your child?
    _____

Sample 61. Parent Biographical Information 2: Music

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Parent Making Nomination:_____

Instructions: Please complete the following questions as they relate to your child's music background.

At what age did your child begin to:

show an interest in music? ____
take music lessons? ____
write his/her own songs or tunes? ____

Please list all of the organized musical activities in which your child participates, such as piano lessons or church choir.

_____

_____

List some of the informal musical activities that happen in your family and indicate the degree to which your child participates.

_____

_____

List any music contests and awards your child has won.

_____

_____

Please offer your own evaluation of your child's musical interests and abilities as well as any other comments you would like to add.

_____

_____

Sample 62. Student Biographical Information 1

Name:_____ Grade:____ Age:____

School:_____ Teacher:_____

Please respond to the following items within the space provided.

1. Describe any special academic interests and activities in which you are involved.

2. List the academic awards and honors you have received.

3. List leadership positions you have held.

4. List extracurricular activities in which you are involved.

5. Give a brief description of some project or activity in which you are currently involved that best represents you as an individual.

Sample 63. Student Biographical Information 2: Visual Art

Name:_____ Grade:____ Age:_____

School:_____ Teacher:_____

1. Think of an art project which you feel was the best you ever did. Give your project a name, and describe it.

2. What art activities do you enjoy most?

3. If you could choose any kind of art project to begin today, what would you choose to do?

4. Approximately how much time do you spend on art projects outside of school hours?

5. Have you had any special lessons or classes in art? What kind, and when?

6. What other activities do you enjoy besides art activities?

7. If you attend the special summer school art class, what would you like to learn?

(Source: Chesterfield (VA) County Public Schools)

Sample 64. Student Biographical Information 3: Music

Name:_____ Grade:____ Age:____

School:_____ Teacher:_____

Answer the following questions in your own words:

1. Do you play any musical instrument now? _____
   If yes, please list:
   Instrument Years played Years of Lessons

2. Are there any musical instruments you would like to learn to play? _____ If yes, please list:

3. How many hours each day do you spend listening to music?____

4. How many hours each day do you spend singing or playing a musical instrument? _____

5. List five of your favorite records or tapes:

6. Do you ever compose music? _____ If yes, please describe the kinds of music you compose.

7. List any music contests or awards you have won.

Sample 65. Student Product Evaluation 1

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Purpose of project:

Intended audience:

Product Ratings:

Rating	Max pts	Catego
_____	20	Product Design
_____	10	Product Execution: Effectiveness of method
_____	10	Effectiveness of display
_____	15	Meeting of proposed purpose
_____	15	Communication with intended audience
_____	15	Illustration of content knowledge
_____	15	Overall creativity
_____	100	TOTAL

Sample 66. Student Product Evaluation 2

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Title of Science Fair Project:

A. CREATIVE ABILITY ..... 30 POINTS _____

Consider originality, ingenious use of materials, implications to society.

B. SCIENTIFIC THOUGHT ..... 30 POINTS _____

Consider organized procedures, clear plans, definite structure, good observations made, understanding shown.

C. SKILL ..... 15 POINTS _____

Consider good workmanship, solid construction, obvious time spent.

D. CLARITY ..... 15 POINTS _____

Consider if project is understandable, self-explanatory, neat, accurate, labeled.

E. DRAMATIC VALUE ..... 10 POINTS _____

Consider attractiveness of project, gimmicks used, etc.

TOTAL ..... 100 POINTS _____

JUDGE'S COMMENTS: What should this student do that he/she did not? What did he/she answer insufficiently?

Sample 67. Student Product Evaluation 3

Student Name:_____ Grade:_____

School:_____ Teacher:_____

1. Product name or subject:

2. Briefly describe the product:

3. To what extent does the product represent an in-depth or superior handling of the subject?

5	4	3	2	1
To a great Extent		Somewhat		To a very Limited Extent

4. To what extent is this product of a "quality-level" beyond what one might expect of a student of this age?

5	4	3	2	1
To a great Extent		Somewhat		To a very Limited Extent

5. To what extent does the product indicate close attention to detail?

5	4	3	2	1
To a great Extent		Somewhat		To a very Limited Extent

6. To what extent is the central idea/conception of the product beyond what a student of this age might undertake?

5	4	3	2	1
To a great Extent		Somewhat		To a very Limited Extent

7. To what extent is the product of overall excellence?

5	4	3	2	1
To a great Extent		Somewhat		To a very Limited Extent

8. List some of the criteria you used in evaluating the excellence of this product.

Sample 68. Student Product Evaluation 4: Visual Arts

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Evaluate the student's talent as evidenced in art work on the following scale of 0-5:

0 Not evident
1 Emerging
2 Average
3 Competent
4 Outstanding
5 Unique

1.	Skillful composition	0	1	2	3	4	5
2.	Originality of ideas	0	1	2	3	4	5
3.	Complexity and detail	0	1	2	3	4	5
4.	Sensitive use of line	0	1	2	3	4	5
5.	Sensitive use of color	0	1	2	3	4	5
6.	Appropriate use of texture	0	1	2	3	4	5
7.	Purposeful use of shape	0	1	2	3	4	5
8.	Effective use of media	0	1	2	3	4	5
9.	Expressiveness	0	1	2	3	4	5
10.	Thoughtful use of space/ perspective	0	1	2	3	4	5
	Column Total	___	___	___	___	___	___
	Weight	0	1	2	3	4	5
	Weighted Column Total	___	___	___	___	___	___
	OVERALL TOTAL						_____

Additional Comments:

Sample 69. Portfolio Review

GUIDELINES

1. Candidates must submit a portfolio that includes 6-8 pieces of art work. Color slides may be used only for 3-D, sculptural works. No works copied from photographs or the works of other artists or designers may be included; the contents are expected to be original and creative works by the candidate. Art works represent three or more of the following:

   A. Pencil, charcoal, conté crayon, pastel or chalk
   B. Pen and ink
   C. Watercolor
   D. Figure studies in any medium
   E. 3-D, sculptural work of any size (slides permitted)
   F. Choice of subject and media

2. All portfolios will be evaluated with the following criteria:

   A. Creativity and originality, expressiveness of content
   B. Skillful use of elements and principles of design
   C. Appropriate techniques with tools and materials
   D. Overall quality of the art works
   E. Evidence of concentration and personal commitment

3. Portfolios will be screened by judges; selected applicants will be invited to complete the following procedures:

   A. Take a short drawing test supervised by judges
   B. Complete two art assignments while observed by judges
   C. Discuss the art works in their portfolios with judges

4. All candidates are expected to have different backgrounds in art and such differences will be considered by the judges in the selection process. Any kind of art work done by candidates will be considered, including class work, cartoons, homemade toys, maps, etc.

(Source: School Board of Pinellas (FL) County; Advanced Placement in Studio Art, Educational Testing Service)

Sample 70. Audition Rating Form

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Evaluate the student's talent as evidenced in art work on the following scale of 0-5:

0 Not evident
1 Emerging
2 Average
3 Competent
4 Outstanding
5 Unique

1.	Pitch (melody, harmony)	0	1	2	3	4	5
2.	Rhythm, timing	0	1	2	3	4	5
3.	Volume, tempo	0	1	2	3	4	5
4.	Articulation, inflection	0	1	2	3	4	5
5.	Structure (design, texture, form)	0	1	2	3	4	5
6.	Vibrato, breath control	0	1	2	3	4	5
7.	Ability to perform a variety of music	0	1	2	3	4	5
8.	Ability to "fit" with group	0	1	2	3	4	5
9.	Ability as a soloist	0	1	2	3	4	5
	Column Total	___	___	___	___	___	___
	Weight	0	1	2	3	4	5
	Weighted Column Total	___	___	___	___	___	___
	OVERALL TOTAL						_____

Additional Comments:

Sample 71. Parent Interview

Parent/Guardian Name:_____

Student Name:_____ Grade:_____

School:_____ Teacher:_____

I. What special talents or skills does your child have?

What examples of behavior illustrate this?

II. I am going to read several sentences. We will go through this list quickly and after each statement please tell me if your child exhibits the behavior "a great deal," "some," "a little," or "not at all."

	A Great Deal	Some	Little	None
1. Has interests of older children or adults in games and reading	_____	_____	_____	_____
2. Is observant	_____	_____	_____	_____
3. Has lots of ideas to share	_____	_____	_____	_____
4. Has many different ways of solving problems	_____	_____	_____	_____
5. Is aware of problems others often do not see	_____	_____	_____	_____
6. Uses unique and unusual ways of solving problems	_____	_____	_____	_____
7. Wants to know how and why	_____	_____	_____	_____
8. Likes to pretend	_____	_____	_____	_____
9. Asks a lot of questions about many subjects	_____	_____	_____	_____
10. Notices detail	_____	_____	_____	_____
11. Enjoys and responds to beauty	_____	_____	_____	_____
12. Is able to plan and organize activities	_____	_____	_____	_____

Sample 71. Continued

	A Great Deal	Some	Little	None
13. Often finds and corrects own mistakes	_____	_____	_____	_____
14. Others seem to enjoy his/her company	_____	_____	_____	_____
15. Makes up stories and has ideas that are unique	_____	_____	_____	_____
16. Has a wide range of interests	_____	_____	_____	_____
17. Gets other children to do what he/she wants	_____	_____	_____	_____
18. Sets high standards for self	_____	_____	_____	_____
19. Is able to laugh at self	_____	_____	_____	_____
20. Likes to do many things and participate whole-heartedly	_____	_____	_____	_____

Other comments:

Sample 72. Student Interview

Student Name:_____ Grade:_____

School:_____ Teacher:_____

Interviewer:_____

What is your easiest subject in school? _____

What subject is most difficult for you? _____

Which subject do you most enjoy? _____

Do you like to work alone or with others? Why? _____

_____

What do you like to do most in your free time? _____

_____

Do you take any private lessons? _____

_____

What programs do you watch on television? _____

_____

What kinds of books do you enjoy reading? _____

_____

Do you have a favorite book? _____

What do you want to be when you grow up? _____

Describe the AT Program as you understand it. _____

_____

Why would you like to be a part of this program? _____

_____

List your daily priorities (play, reading, homework, jobs at home, etc.).

_____

_____

Describe yourself as a student. _____

_____

INTERVIEWER'S COMMENTS: (Student's behavior, attention, interest, clarity of expression, etc.)

_____

_____

_____

_____

Appendix C

Abbreviations and Symbols

Appendix C contains a list of abbreviations and symbols used to denote different instruments, statistics and test scores.

Identification Instruments

Abbreviation	Name of Instrument
AIM	Achievement Identification Measure
AIM-TO	Achievement Identification Measure-Teacher Observation
ASSETS	A Survey of Students' Educational Talents and Skills
ATFR	Arlin Test of Formal Reasoning
CAP	Creativity Assessment Packet
CAT	California Achievement Test
CogAT	Cognitive Abilities Test
CTBS	Comprehensive Tests of Basic Skills
DAT	Differential Aptitude Tests
DCAT	Developing Cognitive Ability Test
EEII	Eby Elementary Identification Instrument
GAIM	Group Achievement Identification Measure
GIFT	Group Inventory for Finding Creative Talent
GSSS	Gifted Student Screening Scale
GTSF	Gifted and Talented Screening Form
IMMA	Intermediate Measure of Music Audiation
ISTEP	Indiana Statewide Testing for Educational Progress
ITBS	Iowa Tests of Basic Skills
K-ABC	Kaufman Assessment Battery for Children
LSI	Leadership Skills Inventory
MAT	Metropolitan Achievement Tests
OLSAT	Otis-Lennon School Ability Test
PARS	Purdue Academic Rating Scales
PEPSI	Purdue Elementary Problem Solving Inventory
PIAT	Peabody Individual Achievement Test
PMMA	Primary Measure of Music Audiation
PPVT	Peabody Picture Vocabulary Test
PRIDE	Preschool and Kindergarten Interest Descriptor
SAGES	Screening Assessment for Gifted Elementary Students
SAT	Scholastic Aptitude Test
S-B	Stanford-Binet Intelligence Scale
SCALE	Scales of Creativity and Learning Environment
SIT	Slosson Intelligence Test
SOI	Structure of Intellect
SOI-LA	Structure of Intellect-Learning Abilities Test

SOMPA	System of Multicultural Pluralistic Assessment
STEP	Sequential Tests of Educational Progress
TCAM	Thinking Creatively in Action and Movement
TCSW	Thinking Creatively with Sounds and Words
TEMA	Test of Early Mathematics Ability
TERA-2	Test of Early Reading Ability-2
TTCT	Torrance Tests of Creative Thinking
VICTA	Vallett Inventory of Critical Thinking Abilities
WAIS-R	Wechsler Adult Intelligence Scale-Revised
WISC-R	Wechsler Intelligence Scale for Children-Revised
WPPSI	Wechsler Preschool and Primary Scale of Intelligence
WRAT	Wide Range Achievement Test

Types of Scores

Symbol	Score
CSI	Cognitive Skills Index
IQ	Intelligence Quotient
NP	National Percentile
SAI	School Ability Index
Sta	Stanine
T	T-Score
Z	Z-Score
%ile	Percentile

Common Statistical Symbols

Symbol	Statistic
x	Score (often Raw Score)
$\bar{x}$	Mean
Md	Median
Mo	Mode
SD (or sd)	Standard Deviation
S_{em}	Standard Error of Measurement
Ra	Range
N	Number of Participants
r	Reliability (or Validity) Coefficient
r^2	Correlation Coefficient
p	Level of Significance

Appendix D

Resources in Indiana

Appendix D includes an annotated bibliography of identification materials available through the four SIS centers which are listed on page 211. Citations contain the title of the work, author(s), annotation and SIS availability (i.e., which centers have the materials). Citations are alphabetized by title.

Resources in Indiana

(Citations alphabetized by title)

Key: Each citation lists:
Title of the work
Author(s)
Annotation

SIS Availability:
B = Ball State
I = IUPUI
P = Purdue
W = Wilson Ed. Ctr.

Advantage: Disadvantaged Gifted — IPW
Rivlin, H., et al
Presentations from a national conference on disadvantaged gifted.

Assessment of Children (Third Edition) — B
Sattler, J.
Text with examination and assessment major tests.

Balancing the Scale for the Disadvantaged Gifted — IPW
Addison, L., Baskin, B., et al
Papers submitted at the Fourth Biennial National Conference on the Disadvantaged Gifted held January, 1980.

Baldwin Identification Matrix 2 — PW
Baldwin, A.
This is a matrix worksheet which uses the Renzulli Scales among others.

Bantam School TAG Program for Talented in the Visual/Performing Arts Gifted — W
Connecticut State Department of Education

Blending Gifted Education with the Total School Program — IPW
Treffinger, D.
Guide for implementing the Individualized Programming Planning Model (IPPM), including needs assessment, inservice and ID ideas.

Characteristics and Identification of Gifted and Talented Students — P
Tuttle, F.B., & Becker, J.R.
General overview of identification of the gifted/talented.

Collected Readings, Volume I — W
Meeker, M.
A collection of papers on a theory that explains how intelligence functions.

Conceptions of Giftedness — BW
Sternberg, R., & Davidson, J.
Essays from major contributors to the field of gifted education.

Creativity of Gifted/Talented Children
Witts, P., & Conant, J. — P

Critical Issues in Gifted Education: Defensible Programs for Cultural and Ethnic Minorities, Vol. II
Maker, J. — BP
Specialists in gifted education analyze the state of the field.

Critical Issues in Gifted Education: Defensible Programs for the Gifted, Vol. I
Maker, J. — BIPW
Gifted specialists analyze design and implementation of programs.

A Different Kind of Boy
Hise, B. — BIW
Story of a young boy who is "different" and how he comes to accept his own uniqueness.

Educating Artistically Talented Students
Clark, G., & Zimmerman, E. — BIPW
Addresses the needs of students gifted in visual arts.

Educating the Preschool/Primary Gifted & Talented
Kaplan, S. — BIPW
Directs attention to the need for identifying young g/t children and providing programs for them.

Educating Verbally Gifted Youth
Fox, R., & Durden, W. — BW
Outlines John Hopkins' model PVGY. Lists tests used for identifying verbal talent.

Education of the Gifted/Talented
Gold, M. — BIPW
Details the characteristics, programs and identification of gifted/talented students.

Excellence in Educating the Gifted
Feldhusen, J., et al — BIPW
Comprehensive look at the gifted child and gifted programming.

Exceptional Asian Children and Youth
Kitano, M., & Chinn, P., Eds. — I
Discussions of characteristics and needs of Asian children; one monograph (of six) specifically focuses on gifted and talented children.

The First National Conference on the Disadvantaged Gifted
Fitsgerald, E. — IPW
Presentations from 1973 conference, covering ID, programs and evaluation.
"Disadvantaged" defined as economically deprived, culturally different, female and/or rural.

Florida GCP-New Awareness: Giftedness in Minority Children
Florida Dept. of Education — W
Assessment of research designed to uncover good screening for minority students.

Gifted Administration
Richert, E. — BW
Source for improving and modifying programs.

Gifted and Talented Multi-Media Kit

— BW

Manual, film strips and cassette tapes covering ID, curriculum and social and emotional development.

Gifted Children

Freehill, M. IPW

General overview of gifted education, including identification.

Gifted Children with Learning Disabilities

Gifted Child Development Center B

Collection of articles on gifted/handicapped children.

Gifted Identification Handbook

EIRC I

Compendium of checklists, forms and procedures appropriate to use when identifying gifted learners.

Gifted Minority Students: Identification and Programs

Council for Exceptional Children B

Abstracts of resources on gifted minority children.

Gifted or Disabled: The Link Between Learning Disabilities and Giftedness

McGee-Cooper, A. B

Help for disabled students to find areas of giftedness.

Gifted Potential in Special Education Students

Lawless, R. PW

Guide to identifying and nurturing giftedness in handicapped students.

Gifted Student as Future Scientist

Brandwein, P. IPW

Overview of identification of students with strong abilities in science.

Gifted Young Children

Roedell, W., et al BIPW

Describes the nature of giftedness, identification and programs for the gifted.

Giftedness, Conflict, and Underachievement

Whitmore, J. BIPW

Overview of the problem of underachieving gifted.

Gifts Differing

Myers, I. W

In-depth explanation of Myers Brigg Type Indicator.

Gifts, Talents and the Very Young

Abraham, W., et al BIPW

Collection of articles on young gifted children, including identification and underachievement.

Guidelines for the Identification of the Gifted and Talented

Baldwin, A., et al BIP

Model for identifying gifted students; includes chapters on designing and implementing the ID system.

Handbook for Identifying the Gifted/Talented
Platow, J. — IPW
Provides practitioners a number of pragmatic options for identifying gifted and talented students, including visual/performing arts rating scales.

Handbook for Parents of the Gifted and Talented
Delp, J., & Martinson, R. — IPW
Covers identification, ways to help parents organize and resource lists.

Ideas for Urban/Rural Gifted/Talented
— — IPW
Includes case histories and program plans.

Identi-form System for Gifted Programs
Weber, P., & Battaglia, C. — IW
Guidelines for gathering data and identifying students for specific programs.

Identification
Richert, S. — BPW

Identification of the Gifted
Hagan, E. — BIPW
Selection and use of standardized tests.

The Identification of the Gifted & Talented
Martinson, R. — IPW
Lists screening measures and discusses the assets and limitations of each.

An Identification Resource Guide on the Gifted and Talented
Van Tassel-Baska, J., & Strykowski, B. — BIPW
Identification issues, tests and nomination forms.

Identifying and Educating the Disadvantaged Gifted/Talented
Smith, D.N. — P

Identifying and Educating the Disadvantaged G/T
Abbott, J., et al — BIPW
Collection of essays on ID and curriculum planning; special attention given to Navajo, Black and Hispanic gifted.

Identifying and Meeting the Needs of Minority and Low Income Gifted Students
Baldwin, A. — BIPW
Videotaped presentation from Leadership Accessing; January 25, 1989.

Identifying and Meeting the Needs of the Young Gifted Child
Roedell, W. — BIP
Overview of needs, identification and programming for young gifted youth.

Identifying and Nurturing the Gifted: An International Perspective
Heller, K., & Feldhusen, J., Eds. — IP
Summarizes the results of the 6th World Conference on Gifted and Talented Children, Hamburg, August, 1985.

Identifying and Programming for Hispanic Gifted & Talented Students P
Conn Cept IX

Identifying and Teaching the Gifted, American Education's Stepchildren B
Fisher, M., & Fisher, E.
Recommendations and activities for identification and development of the gifted.

Identifying Gifted Students: Guideline for School Districts P
The State Educ. Dept.

Identifying the Talented and Gifted B
Haisley, F.
Part of the Oregon series on g/t education.

Increasing Minority Participation in Gifted Programs BI
Yancey, E.
Includes definitions, issues, checklists, promising practices and recommendations.

Inservice Training Manual: Activities for ID/Program Planning for G/T IPW
Kaplan, S., Madsen, S., et al
Basic outline for inservice related to ID and program planning for the intellectually gifted.

Instruments for Identification of the Gifted IPW
Haladyna, T., & Olsen, R.
Examples of instruments, with emphasis on the economically disadvantaged.

Intellectual Giftedness in Disabled Persons BIPW
Whitmore, J., & Maker, J.
Discussion of handicapped gifted students, including suggestions for identification.

Intellectual Talent Research and Development W
Keating, D.
Research-based articles on identification and programming for mathematically precocious youth.

Issues in Educating Young Gifted Children: Promising Practices IPW
Karnes, M.
Leadership Accessing monograph presents practices for identifying and programming for young gifted children who also may be handicapped or from minority groups.

Issues in Gifted Education BIP
Gallagher, J., Gowan, J., & Passow, H.
Topics include ID, secondary program alternatives, guidance and areas of needed research.

Learning-Disabled/Gifted Children: Identification and Programming BW
Fox, R., Brody, R., & Tobin, D.
Series of articles on the problems and practices of identification of the learning disabled gifted.

Learning Disabled/Gifted Children IP
Collins, D., et al
Description of g/t learning disabled students and how to identify them.

Learning Disabled/Gifted Children
Porter Co. Special Education — P
Essay on GT/LD programming, identification tools and suggestions.

Mathematical Talent: Discovery, Description, and Development
Stanley, J. — BW
Characteristics of mathematically precocious students.

Module 1, Awareness
Matson, G. — PW
Lists the characteristics of gifted/talented children.

Module 4, Identification
Peck, J. — W
Contains scales for rating behavioral characteristics.

National Report on Identification
Richert, S., et al — PW
Most comprehensive guide to identification available today; includes extensive information on disadvantaged gifted.

New Awareness: Giftedness in Minority Children
Seminole County School District — P
Describes the field testing of the Florida strategy to identify and serve minority children.

Nurturing Academic Talent in Early Childhood—Science
Karnes, M., & Strong, P. — PW
Short text on ID and stimulation of very young children with academic talent in the science area.

Nurturing Leadership Talent in Early Childhood
Karnes, M., & Strong, P. — PW
Identification and stimulation of children with leadership talent in early childhood.

Nurturing Psychomotor Talent in Early Childhood
Karnes, M., et al — PW
Common characteristics of children with psychomotor talent, goal areas and activities for stimulation.

Nurturing Visual & Performing Arts Talent in Early Childhood
Karnes, M. — P
Text on how to identify and stimulate natural talent in the art and music areas for very young children.

PACE - Performance, Achievement, Creativity, Enrichment, Grades K-9
State Dept. of Connecticut — IW

Potential Learning
Callahan, C. — W
Series of tapes on various aspects of gifted education, including identification of underachievers.

Program and Curriculum Development for Gifted Education
Indiana Model Sites — BIW
Handbook compiled by the directors of the Model Sites on program development, including ID, scope and sequence, and program evaluation.

Project Explore - Grades 5 & 6 Stamford
State Dept. of Connecticut — W

Promising Practices: Teaching the Disadvantaged
Miley, J., et al — BIPW
A series of articles that stress specific cultural diversities of some gifted children.

Psychological and Emotional Needs of Gifted Youngsters
Impellizerl, A., et al — W

Reaching for the Stars: Discovering Needs of the Gifted/Talented
Mallis, J., & Duke, E. — BIPW
Includes articles, checklists, rating scales and inventories.

Reaching for the Stars: Recognizing Characteristics of the G/T
Mallis, J., & Heinemann, A. — BIPW
Contains checklists, objectives, rationale, pre-post test activities and suggested resources.

Reaching for the Stars: Searching for G/T Students Among the Disadvantaged
Mallis, J., & Duke, E. — BIPW
Workbook on identification of disadvantaged gifted students.

Reaching for the Stars: Search for G/T Students Among the Handicapped
Mallis, J., & Alexander, N. — BIPW
Workbook on identification of gifted handicapped students.

Reaching for the Stars: Searching for Underachievers Among the G/T
Mallis, J., & Heinemann, A. — BIPW
Workbook on how to identify underachieving gifted students.

The Revolving Door Identification Model
Renzulli, J., et al — BIPW
Describes the "revolving door" concept of identification.

Secondary Programs for the Gifted/Talented
Arnold, A., et al — BIPW
Practical suggestions on identification and programming for secondary gifted students.

Self-Directed Study Guide
Treffinger, D., & Curl, C. — BIW
General overview of gifted education.

Simple Gifts: Book of Readings
Clasen, R.E. — P
Contains chapters on ID, history, programs, methods, creativity and the gifted handicapped.

Smart Kids with School Problems
Vail, P. — IW
Focuses on LD children; includes case histories and an explanation of different tests.

Somewhere to Turn: Strategies for Parents of the Gifted and Talented
Hall, E., & Skinner, N. — BIPW
General overview for parents; covers traits of giftedness and ways to identify preschool-aged gifted children.

Sourcebook for Teachers and Administrators
Johns Hopkins University — BW
Suggestions for general screening and program options for highly gifted youth.

Study of Economic Disadvantage Among Academically Able Learners
Van Tassel-Baska, J. — W
Monograph on ID of minority g/t and effects of special programming.

SWEPT: South Widson Elementary Project Talent, Grades 4,5,6
State Dept. of Connecticut — W
Question-answer format of information about a specific program model.

Talent Identification Program Educational Opportunity Guide
Talent Identification Program — P

Teacher Pleaser or Potentially Gifted?
Mittan, K. — BIW
Discusses differences between teacher pleasers and gifted.

Under One Cover: Gifted and Talented Education in Perspective
Renzulli, J., & Stoddard, E. — BW
Overview of gifted education with examples of different types of programming for different kinds of giftedness.

Underachievement Syndrome
Rimm, S. — BIPW
Discussion of underachievement, including causes and cures.

The Underserved: Our Young Gifted Children
Karnes, M. — IPW
Identification and programming for gifted preschoolers.

Understanding Art Testing
Clark, G., et al — W
Includes a list of tests, as well as theories from Leta Hollingworth's research.

What Makes Giftedness? A Reexamination of the Definition of the Gifted & Talented
Renzulli, J. — BIPW
Comprehensive treatment of issues in defining giftedness.

Why Bright Children Underachieve: The Pressures They Feel
Rimm, S. — BI
Leadership Accessing monograph on underachievement.

World of the Gifted
Toledo Public Schools — BP

Your Gifted Child and You
Kaufmann, F. — BIW
General overview of giftedness, written for parents.

SHARED INFORMATION SERVICES LOCATIONS

BALL STATE UNIVERSITY
Stationary site
Coordinator: Kathy Stinton-Glen
Burris Laboratory School
Ball State University
Muncie, IN 47306
(317) 285-8617

IU-PURDUE UNIVERSITY
INDIANAPOLIS
Stationary site
Coordinator: Janice Radford
IUPUI/ES 2126A
902 West New York Street
Indianapolis, IN 46202-5155
(317) 274-6867 (collection)
(317) 274-3310 (coordinator)

PURDUE UNIVERSITY
Mobile site
Coordinator: Marilyn Doggett
Gifted Education Resource Institute
South Campus Courts - Bldg. G
West Lafayette, IN 47907
(317) 494-1887

WILLIAM E. WILSON
EDUCATION CENTER
Mobile and stationary site
Coordinator: Kay Colston
Wilson Education Center
630 Meigs Avenue
Jeffersonville, IN 47130
(812) 288-4825

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Glossary

511 Rule (511 IAC 6-9): Title 511 of the Indiana Administrative Code; the Administrative Rules of the Indiana State Board of Education. Section 6-9 deals with gifted/talented education. Compliance must be demonstrated for any public school corporation to receive money from the Indiana Department of Education for a gifted/talented program.

Achievement Test: An instrument designed to assess the outcomes of school instruction in specific content areas (reading, mathematics, science, etc.)

Age Norms: Norms which indicate how a child at a given age performed on a specified test.

Alternate Form Reliability: The consistency between two different forms of the same test. A test is reliable if a student scores the same on Form A and Form B.

Appeals: The process whereby students may have their records reconsidered by a review committee in order to gain entry into a gifted/talented program. Required by the 511 Rule.

Aptitude Test: An instrument designed to assess a person's potential performance in a certain content area. Because most skills tested are learned in school, aptitude tests are often considered to be achievement tests in reality.

Audition: An informal measure in which a person is rated on their actual performance before an audience.

BBPC (Broad-Based Planning Committee): The committee of school and community members which assumes advisory and public relations roles for a gifted/talented program.

Baldwin Matrix: One of the most commonly used matrices in which a student's test scores are given a weight of 1 to 5, added together, then weighted again and re-added for a total score. The total weighted scores are then compared across students in order to make placement decisions.

Biographical Information: An informal measure in which students provide information through written biographies or lists of extracurricular activities, awards, and so on.

CSI (Cognitive Skills Index): A measure of cognitive ability provided by the ISTEP. The CSI has a mean of 100 and a standard deviation of 16. It is often used by educators in Indiana as a measure of student academic potential.

Ceiling: The upper ability limit of a test; the highest score possible or the highest score at which a test is reliable and valid.

Ceiling Effect: The phenomenon that occurs when a test is too easy (i.e., does not have enough difficult items), and does not discriminate among students with high ability. A ceiling effect limits the usefulness of a test for assessing the abilities of gifted/talented students.

Checklist: An informal measure in which an observer (often a teacher or parent) indicates whether or not a student demonstrates certain behaviors or characteristics.

Cognitive Abilities Test:
1) A class of measures of general intellectual ability, similar to intelligence tests.
2) A specific group measure (the CogAT) designed to assess general intellectual abilities.

Composite Score: A combined or total score. It may be a total score for some or all of the subscores in a measure.

Concurrent Validity: The degree of relationship between one instrument and another that presumably measures the same concept. (Example: The relationship between scores on the WISC-R and the Stanford-Binet Intelligence Scale.)

Construct Validity: The degree to which a test measures the actual concept (construct) it was designed to measure. (Example: The degree to which the Torrance Tests of Creative Thinking measure creativity.)

Content Validity: The degree to which a test assesses a specified domain. (Example: The degree to which a classroom test measures knowledge of covered material, without including other material.)

Convergent Thinking Skills: The ability to think in a convergent manner, i.e., to produce the one, correct answer to a question or problem.

Correlation: The degree of relationship between two variables.

Correlation Coefficient: A statistic; indicates the degree of relationship between two variables. It is a number between -1.0 and 1.0 (inclusive). A 1.0 indicates a strong positive relationship between two variables; a -1.0 indicates a strong negative relationship. A correlation coefficient of 0.0 indicates that no relationship exists between the variables.

Creativity Test: A measure designed to assess the ability of individuals to generate new or unique solutions to problems.

Criteria / Criterion Levels: The level or score which qualifies a student for nomination or selection for a program.

Criterion Method: A type of student profile in which a student's test scores are entered on a chart, converted into weighted scores from 1 to 5 and then directly compared to a selection criterion.

Criterion-Referenced Test: A test in which a student must answer a certain number of items correctly in order to "pass" the test and demonstrate mastery of the material. (Example: The written exam for the Indiana driver's license.)

Cultural Bias: The tendency of a person or instrument to lower the score of a student who is from a different cultural background than the majority population.

Culture-Fair / Culture-Free Test: A hypothetical ideal in which an instrument does not contain any cultural bias.

Cutoff Threshold: A method of data analysis in which a strict criterion level is established for formal test scores, and all students with scores below that level are not considered or accepted into a program.

Data Analysis: The process of combining data for each student into a composite index, which is then compared across students to form a basis for placement decisions. Required by the 511 Rule.

Divergent Thinking Skills: The ability to think in a divergent manner, i.e., to produce multiple solutions to a question or problem.

Elaboration: A theorized type of creativity; the ability to embellish upon previous material in order to produce something new or different.

Evaluation: The process of assessing the effectiveness and value of something.

Exit Procedures: Administrative procedures for dealing with students who move out of the school corporation or who wish to withdraw from a gifted/talented program.

"Eyeball" Method: A method of data analysis (student profile) in which the selection committee examines a chart of unweighted test scores and "eyeballs" the students with the top scores, without determining the composite scores or criterion levels.

Flexibility: A theorized type of creativity; the ability to perceive and utilize different perspectives in order to solve a problem.

Fluency: A theorized type of creativity; the ability to generate a large number of ideas or solutions.

Formal Instruments: Published, standardized measures that may be administered in a group or individual setting. Required by the 511 Rule.

Formative Evaluation: The ongoing process of assessing the effectiveness and value of a process or program while it is in progress. Required by the 511 Rule.

Gifted/Talented Student: A child, including a preschool child, who requires services and educational experiences not ordinarily offered in the regular school curriculum to develop demonstrated or potential aptitude, leadership and creativity in the intellectual/academic or visual/performing arts areas.

Grade-Equivalent Score: A test score that represents the average performance of students in a given month of the school year. (Example: A grade-equivalent score of 3.2 represents the typical performance of a national sample of students in the second month of third grade.)

Group Measure / Instrument: A paper and pencil measure that can be administered by untrained personnel to a large group of students at one time.

Highly Gifted Student: A student who has an IQ score of 142 or more, manifests 90 to 100% of gifted/talented characteristics or functions at more than three and one-half grade levels above their age group.

IQ (Intelligence Quotient): A standard score obtained from an intelligence test, theorized to represent a student's potential for learning. The average IQ score is 100.

ISTEP (Indiana Statewide Testing for Educational Progress): The student assessment program required by law for all public school corporations in Indiana. ISTEP consists of the California Achievement Test (Series E) with a few added proficiency items, and is administered to all students in grades 1, 2, 3, 6, 8, 9 and 11. A writing sample also is obtained from all students in grades 3, 6, 8, 9 and 11. The scores provided include national percentiles on the achievement test and the Cognitive Skills Index (CSI). Because the ISTEP was developed to assess minimum competencies, it has a low ceiling and is not recommended for the final selection of students for a gifted/talented program.

Identification: The process of nominating, selecting and placing students in a program that meets their educational needs. Required by the 511 Rule.

Individual Measure / Instrument: An assessment devise that must be administered by a trained examiner to a single student.

Informal Instrument: A nonstandardized instrument; may be either published or unpublished. Required by the 511 Rule.

Inservice: The process of providing technical training to staff members.

Instruments: Assessment devises, tests or measures; may be formal or informal, published or unpublished.

Intelligence / IQ Test: An instrument designed to assess general intellectual functioning and potential for learning.

Interest Inventory: An instrument designed to assess student interests.

Inter-Rater Reliability: The consistency of scores on a test when two or more people administer it or when more than one rater is used.

Interview: An informal means of assessment in which students (or their parents) meet to answer questions from a person or group for identification or evaluation purposes.

Labeling Effect: The positive or negative effect of applying a label (such as "gifted student") to a person.

Learning Disability: A significant discrepancy between a student's performance (usually measured by an achievement test) and potential (as measured by an individual intelligence test).

Learning Style Measure: An instrument designed to assess the approach to solving problems or cognitive tasks preferred by an individual.

Likert Scale: A scale used for making ratings; ratings are most commonly given 1-5 points, with 1 being "strongly disagree," 3 being "undecided" and 5 being "strongly agree."

Locally Constructed (Classroom) Test: A test designed by an individual teacher to assess student learning of material that was (or will be) presented in the classroom.

Matrix / Matrices:

1) One of several methods for developing a composite index and comparing data across students for the purpose of selection for a program. Required by the 511 Rule.
2) A specific method for developing a composite index and comparing data across students. See **Baldwin Matrix** for an example.

Mean: A statistic; the arithmetic average.

Median: A statistic; the middle score in a ranked distribution of scores, i.e., the 50th percentile score.

Mode: A statistic; the most frequent score in a distribution of scores.

Multiple Criteria: Identification procedures which include multiple measures of student ability, especially procedures which include both formal and informal measures. Required by the 511 Rule.

Nomination:

1) The process of creating a "pool" of student candidates for a program. Required by the 511 Rule.
2) An informal measure in which an observer indicates that they believe a student should be considered for a gifted/talented program. May be completed by teachers, parents, peers or the students themselves. Required by the 511 Rule.

Nontraditional Assessment: Identification procedures which utilize instruments other than achievement or intelligence tests, especially those which use informal measures. Required by the 511 Rule.

Normal Distribution / Standard Distribution / Normal Curve/ Bell-Shaped Curve: A graph in which test scores are distributed in a symmetrical curve, roughly the shape of a bell.

Normative / Standardization Sample: The sample of people who completed an instrument when it was being developed. Their scores form the norms for the instrument.

Norms: Standards that indicate how well an examinee performed on an instrument. The standards are formed by the scores of the normative sample or the first group who completed the test.

Norm-Referenced Test: Any instrument which assesses student performance relative to that of other students or norms. (Examples: Intelligence tests, class ranking, most student grades.)

Notification: The process of informing parents and students about placement decisions.

Off-Level Testing: The process of administering a level of a test higher than that normally given based on chronological age.

Originality: A theorized type of creativity; the ability to generate new, unique solutions to a problem.

Peer Nomination: A type of nomination procedure in which students are asked to name their peers who have certain characteristics or who exhibit certain behaviors. Also called **sociogram**.

Percentile: A statistic; indicates relative standing in a group. (Example: A score at the 85th percentile is higher than 85 percent of all scores on the test.)

Pictorial Criterion Method: A specific method of data analysis in which a student profile is presented in a visual format. (Example: The Southern-Spicker Profile.)

Placement: The process of deciding which students have a need for the program to be offered and completing the administrative procedures to schedule them there. Required by the 511 Rule.

Pool: A collection of students who are candidates for selection for a gifted/talented program.

Portfolio: An informal measure in which multiple samples of student products (usually obtained over a period of time) are evaluated.

Predictive Validity: The degree to which a test can predict later performance. (Example: The degree to which the SAT can predict college grades.)

Published Informal Instrument: A nonstandardized measure which has been published.

Rating Scale: An informal measure in which an observer (usually a teacher or parent) is asked to evaluate the degree to which a student demonstrated certain behaviors or characteristics.

Raw Score: The number of questions answered correctly (or, in some cases, incorrectly) on an instrument.

Reliability: The consistency of a measure; usually expressed as a correlation coefficient. (Example: The ability of a thermometer to give the same reading on the same person over and over.)

Removal Procedures: Administrative procedures for dealing with students whose needs are not met by the program. Required by the 511 Rule.

Review:

1) The process of examining the records of students who have made appeals or who have entered the school corporation during the school year. Required by the 511 Rule.
2) The process of evaluating the effectiveness of the identification procedures and the accuracy of student placement. Required by the 511 Rule.

Review Committee: The committee responsible for conducting reviews. Required by the 511 Rule.

SIS (Shared Information Services) Centers: The group of four resource centers in Indiana, which specialize in materials relating the gifted/talented education.

SOMPA (System of Multicultural Pluralistic Assessment): A battery of instruments originally developed to identify mentally handicapped children. Use with the gifted population is limited to awarding "bonus points," based on a mathematical formula, to the WISC-R scores of black and Hispanic students.

Screening Committee: The committee responsible for identifying students to be nominated to the "pool" of candidates for a gifted/talented program. Required by the 511 Rule.

Secondary Screening: The process of gathering additional data on all nominated students to determine their educational needs. Required by the 511 Rule.

Selection Committee: The committee responsible for conducting data analysis and making placement decisions. Required by the 511 Rule.

Self-Concept Measure: An instrument designed to assess the self-concept or self-esteem of an individual.

Sociogram: A type of nomination procedure in which students are asked to name their peers who have certain characteristics or who exhibit certain behaviors. Also called **peer nomination**.

Split-Half Reliability: The consistency of items within a test. (Example: Odd-numbered items should be equally as difficult as even-numbered items.)

Standard Deviation: A statistic; indicates how scores are spread out around the average score. The more the scores cluster around the average, the smaller the standard deviation.

Standard Error of Measurement: A statistic; indicates the accuracy of a test. The smaller the standard error, the more accurate the test. (Example: A political survey might be accurate within 3%.)

Standard Score: A derived score used to represent an examinee's performance. A generic term for several derived scores, such as T-Scores, Z-Scores, IQs and stanines.

Standardization Sample: The sample of people who completed a formal instrument when it was being developed. Their scores form the norms for the instrument.

Standardized Test: A measure which has a) prescribed instructions to the examinee; b) scoring based on a set of predetermined rules; and c) norms to which individual scores are compared. Required by the 511 Rule.

Stanine: A standard score ranging from a low of 1 to a high of 9. The mean is 5, and the standard deviation is 2. All students at the 96th percentile or higher receive a stanine score of 9.

Structure of Intellect (SOI):

1) Guilford's theory in which human intelligence is thought to be composed of 120 separate abilities.
2) A formal instrument designed to measure the 120 theorized abilities.

Student Product: A sample of actual student work or performance. Required by the 511 Rule.

Student Profile:

1) A means of data analysis. Several variations are possible; the most common is to enter a student's scores on a chart and convert them into weighted scores from 1 to 5, which are then directly compared to a selection criterion.
2) A form on which test scores for one or more students are entered and compared.
3) A generic term for student records or files.

Summative Evaluation: The process of assessing the merits of a process or program which is already in place or completed. Required by the 511 Rule.

T-Score:

1) A standard score which has a mean of 50 and a standard deviation of 10.
2) A method of data analysis in which student scores are converted into T-Scores, weighted and combined into a composite index which is compared across students.

Teacher Rating: The opinion given by teachers on rating scales or checklists of student behaviors or characteristics. Required by the 511 Rule.

Test-Retest Reliability: The consistency of a test over time. Assessed by giving one person or group the same test on several different occasions and comparing the scores.

Traditional Assessment: Identification procedures which utilize formal instruments only, especially those which utilize intelligence or achievement tests.

Underachiever: A student who demonstrates a discrepancy between performance and potential.

Unpublished Informal Instrument: A nonstandardized measure which has not been published.

Validity: The degree to which a test actually measures what it is used to measure. (Example: A thermometer is valid for measuring temperature, but not for measuring intelligence.)

Z-Score: A standard score which has a mean of 0 and a standard deviation of 1.

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